

Department of Biology and Biochemistry Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology Department of Propaedeutics and Internal Medicine Department of Pediatrics-1		11-2024 Page 1 of 36
Working studying program of the discipline "Urogenital system in pathology" (Syllabus) Educational program 6B 10115 "Medicine"		

## Syllabus

**Department of Biology and Biochemistry**  
**Department of Pathology and Forensic Medicine**  
**Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology**  
**Department of Propaedeutics and Internal Medicine**  
**Department of Pediatrics-1**

**Working curriculum of the discipline "Urogenital system in pathology"**  
**Educational program 6B 10115 "Medicine"**

1.	General information about the discipline		
1.1	Discipline code: GSP3216	1.6	Academic year: 2024-2025
1.2	Course title: Genitourinary system in pathology	1.7	Year: 3
1.3	Prerequisites: General pathology, genitourinary system in norm	1.8	Semester : 6
1.4	Postrequisites: Diseases of the urinary system	1.9	Number of credits ( ECTS ): 5 / 150
1.5	Cycle: BD	1.10	Component: IC
2.	Description of the discipline		
Formation of basic knowledge of semiotics, syndromology, methods of physical examination and basic research of laboratory parameters, issues of etiology, pathogenesis, morphogenesis, biological characteristics of microorganisms of common pathological processes of the urogenital system, acquisition of skills in selection of research methods of diagnostics and drugs for treatment of the most common diseases in adults and children.			
3.	Summative Assessment Form		
3.1	● MCQ Testing	3.5	Coursework
3.2	Writing	3.6	Essay
3.3	Oral	3.7	Project
3.4	● OSPE/OSCE or practical skills assessment	3.8	Other (specify)
4.	Objectives of the discipline		
Formation of a holistic understanding of the pathology of the urogenital system based on symptoms and syndromes, as well as methods of their study; ensuring the achievement of the final learning outcomes based on the joint study of the pathology of the genitourinary system in the propaedeutics of internal and childhood diseases with basic disciplines. Formation of clinical thinking skills based on knowledge of pathophysiological mechanisms of the course, pathological changes, complications and results of diseases, methods of physical and clinical laboratory examination and choice of drugs in adults and children with the main clinical syndromes in pathology of the genitourinary system.			
5.	Final learning outcomes (LO of the discipline)		
LO1	Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of pathology of the urogenital system.		
LO2	Proficient in methods of conducting questioning and physical examination of adults and children, uses clinical thinking in collecting information when drawing up an examination plan; outlines the scope of basic and additional studies to clarify the syndrome of damage in pathology of the urogenital system .		
LO3	Uses clinical judgment in gathering information when interpreting morphological, laboratory and instrumental research methods for patients with pathology of the urogenital system, formulates syndromic diagnosis, fills medical records.		
LO4	Communicates information, ideas, problems and solutions to patients and their family members, and is proficient in ethical and deontological practices when communicating with patients, their relatives and colleagues.		
LO5	Determines pathological processes at the organ and cellular levels, interprets data on the pathophysiology and morphology of diseases taking into account the clinical data of patients, makes conclusions, explains the patterns of development of complications and outcomes of pathology of the genitourinary system, evaluates the results of experimental studies.		

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LO6	Selects medications in accordance with the diagnosis, writes prescriptions, determines the dosage mode, recognizes adverse effects of medications, predicts the development of side effects and interactions of medications used in pathology of the urogenital system.																																																																																																																																																																																																																																																																								
LO 7	Analyzes professional literature when working with scientific articles, completes a project, demonstrates a desire for continuous improvement of their activities.																																																																																																																																																																																																																																																																								
5.1	LO discipline	Learning outcomes of the OP, which are associated with the discipline LO																																																																																																																																																																																																																																																																							
	LO 1 LO 2	LO 1 Applies fundamental knowledge in the field of biomedical, clinical, epidemiological and social-behavioral sciences in practice.																																																																																																																																																																																																																																																																							
	LO 3 LO 4	LO 2 Provides patient-centered care in the biomedical, clinical, epidemiological and social-behavioral sciences aimed at the diagnosis, treatment and prevention of the most common diseases.																																																																																																																																																																																																																																																																							
	LO 5 LO 6 LO 7	LO 6 Conducts admission, diagnostics, treatment, dynamic observation and rehabilitation of pediatric and adult patients, including pregnant women, based on the principles of evidence-based medicine.																																																																																																																																																																																																																																																																							
6.	Detailed information about the discipline																																																																																																																																																																																																																																																																								
6.1	<ul style="list-style-type: none"><li>• Location of the Department of Biology and Biochemistry : Shymkent , Al-Farabi sq. , 1, main academic building of SKMA, 4th floor .</li><li>• Location of the Department of Pathology and Forensic Medicine: Shymkent, Al-Farabi sq., 3, academic building No. 2 SKMA , 4th floor, classroom No.404a,b, No.406, No.408, No.409, No.411a, b; e-mail: <a href="mailto:Patan.gisto@mail.ru">Patan.gisto@mail.ru</a></li><li>• Location of the Department of Pharmacology, Pharmacotherapy and Clinic of Pharmacology: Shymkent, Al-Farabi sq., 1, main building of SKMA, 4th floor , room No.419,No.421,No.425,No.429,No.431,No.434,No.417, lecture hall No. 4 ; tel . 40-82-06(ATS), 227 (external).</li><li>• Location of the Department of Internal Medicine: Shymkent, Clinic "ParkHealth", st. Kurmanbekova, 2; tel: 8 701 738 6114, e-mail: <a href="mailto:propedevtica_vb@mail.ru">propedevtica_vb@mail.ru</a></li><li>• Location of the Department of Pediatrics-1: Shymkent, Argynbekov St., 125, Regional Children's Hospital; e-mail: <a href="mailto:ped.rez@mail.ru">ped.rez@mail.ru</a></li></ul>																																																																																																																																																																																																																																																																								
6.2	Number of hours	Lectures	Practical. les.	Laboratory classes	SIWT	SIW																																																																																																																																																																																																																																																																			
		10	40		15	85																																																																																																																																																																																																																																																																			
6.3	Study plan for the discipline																																																																																																																																																																																																																																																																								
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Propaedeutics of children diseases (0.5 cr.)	SIW				4				5		5			14+3(IA)= 17
	Lec										1			1
	Practical				1						3			4
	SIWT				1						1			2
Biochemistry (0.5 cr.)	SIW				2						5			7+1(IA)= 8
	Lec										1			1
	Practical				2						1		1	4
	SIWT												1	1
	SIW												7	7+2(IA)= 9

7. Information about teachers					
No.	Full name	Degrees and Position	Email address	Scientific interests etc.	Note
Department of Biology and Biochemistry					
1	Kenzhebekov Pernebek Kenzhebekovich	Candidate of chemical sciences, professor	kenzhebekov.p@gmail.com	"Study of the chemical composition of volatile aroma-forming compounds in some meat products"	Author of 42 scientific publications and 1 educational and methodological manual
2	Ordabekova Asmira Baltabaevna	Master of Biology, senior teacher	asmira75@mail.ru	"The antioxidant properties of selenium in toxic liver injury"	Author of 22 scientific publications and 1 teaching aid
3	Asilbekova Gulshakhar Kenesbekovna	Master of Biology, senior teacher		"Microelementoses"	Author of 14 scientific publications and 1 teaching aid
4	Kanzhigitova Moldir Zharkynbekkyzy	Master of Biology, senior teacher	Molya_1503	Study of legume and legume plants according to the law of homologous series	Author of 10 scientific publications
5	Zhienbaeva Aliya Aitbaevna	Teacher	alia.zhienbaeva@mail.ru	-	Author of 3 scientific publications
6	Beisebaeva Lyazzat Mukhtarovna	Senior Teacher	lyzzatb70@list.ru	"Organization of clinical diagnostic laboratory service in modern conditions in the Republic of Kazakhstan"	Author of 3 scientific publications
Department of Pathology and Forensic Medicine					
1	Sadykova Alia Shamilevna	Head of the Department of Pathology and forensic medicine, doctor of medical sciences, acting professor	aliya.sadykova.66@mail.ru	The topic of the scientific direction "Pathology of the immune system, pathological anatomy of tumors"	Author of 84 scientific publications, 5 textbooks, 1 patent for invention, 1 monograph
2	Bisimbaeva Saule Babatovna	Candidate of medical sciences, acting docent	Bisimbaeva@inbox.ru	The topic of the scientific direction is "Hygienic justification of optimal treatment of pulmonary tuberculosis"	Author of 40 scientific publications, 2 provisional patents, 1 patent, 1 monograph and 2 acts of implementation of the results of scientific research work
3	Dosybaev Bakhytzhann Krykbaevich	Candidate of medical sciences, acting docent	Krik85@mail.ru	The topic of the scientific direction "Prognostic assessment of the health of workers in cement production"	Author of 14 scientific publications
4	Kulbalieva Zhannat	PhD,	zhann_7@mail.ru	The topic of the scientific direction is "The influence	Author of 4 scientific publications, 1 teaching aid, 2

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	Zhaksyslykovna	Candidate of medical sciences, acting docent		of lead on the oxidative metabolism of lipids and proteins in the blood and its correction with biofenikol"	acts of implementation of the results of scientific research work and 3 acts of implementation of the results of educational and methodological work
5	Kerimov Rassim Azatovich	Master of Medicine, senior teacher	kir-2004@list.ru	The topic of the scientific research "Diagnostics and prevention of colorectal cancer "	Author of 20 scientific publications
6	Abildina Kalamkas Berzhanovna	Master, assistant	mskas1972@mail.ru	The topic of the scientific direction is "Morphogenesis of atherosclerosis of the aorta and renal arteries in residents of Shymkent city"	Author of 19 scientific publications 1teaching aid
7	Ignatieva Anastasia Sergeevna	Senior teacher	zhelonkina_88@mail.ru	-	-
8	Berdaliev Gulmira Bakhytkyzy	Senior teacher	mira-3505@mail.ru	-	Author of 6 scientific publications
9	Kurymbaeva Ainur Rashidkyzy	Assistant	Smp_zoj@mail.ru	-	-
10	Seydakbar Aisana Usenovna	Teacher	aseydakbar@mail.ru	-	Author of 2 scientific publications
11	Duysembieva Zhazira Mereykyzy	Teacher	zhazira0508@mail.ru	Theme of the scientific direction "Scientific foundations of the formation of a healthy lifestyle among residents of the South Kazakhstan region"	Author of 3 scientific publications
Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology					
1	Ibragimova Aigul Gaffarovna	Candidate of pharmacological sciences, acting docent	aygul_ibr@mail.ru	"Problems of rational use of medicines: effective and safe pharmacotherapy, pharmacoepidemiological, pharmacoeconomic, pharmacogenetic aspects. Personalized therapy. Development of herbal preparations and effective herbal therapy of various diseases"	Author of more than 20 scientific articles, textbooks, and methodological recommendations
2	Abuova Gulnara Turganbaevna	Candidate of biological sciences, acting docent	abuova@mail.ru	"Pharmacoeconomic approaches to optimizing the treatment of acute respiratory infections in outpatient settings"	Author of more than 20 scientific papers, textbooks, and methodological recommendations
3	Korganbaeva Zaure Sarybaevna	Candidate of biological sciences, acting docent	korganbaeva055@mail.ru	"Substantiation of the protective effect of phytopreparations on blood and liver damage during lead poisoning"	Author of more than 20 scientific works, teaching aids, methodological recommendations
4	Syrmanova Nurgul Rakhmanovna	Master of Medical Sciences, Senior teacher	n_rakchman@mail.ru	"Study of the specific activities of extracts isolated from plants of the genus Cassia"	Author of more than 20 scientific papers, textbooks, and methodological recommendations

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5	Dustanova Zhamila Talibbaevna	Senior teacher	jam11.76.76@mail.ru	"Manufacturing of tablet dosage form of hydrophobized dry licorice extract"	Author of 5 scientific articles
6	Muyutova Makhsuda Nasyrovna	Master of Medical Sciences, senior teacher	mahsu_med@mail.ru	Clinical pharmacology in general medicine and neurology	Author of 3 scientific articles
Department of Propaedeutics and Internal Medicine					
1	Bekmurzaeva Elmira Kuanyshevna	Head of Department Doctor of Medical Sciences, professor	elmira-bek@mail.ru	Scientific work: "Clinical and hygienic features of the formation of diseases of the digestive organs in workers of a modern oil refining production (on the example of JSC "SHNOS")"	Author of over 260 scientific and methodological publications, 2 textbooks, 8 teaching aids. Certificate of therapist, gastroenterologist and rheumatologist of the highest category. 2005 - Doctor of Medical Sciences, approved by the Higher Attestation Commission of the Republic of Kazakhstan (diploma FK No. 0000379), (14.00.50 - "Occupational Medicine"), professor in the specialty "Medicine" (diploma PR No. 0000446), Higher Attestation Commission of the Republic of Kazakhstan. Under the supervision of Bekmurzaeva E.K., 3 candidates of medical sciences were prepared, who received approval from the Committee for Control and Certification in the Sphere of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan. Awarded for high scientific achievements with medals, diplomas and certificates: Robert Koch 2012, Peterkoff 2014, Albert Schweitzer 2015, "Excellent Healthcare Worker of the Republic of Kazakhstan", Republican grant of the Ministry of Education and Science of the Republic of Kazakhstan "Best University Teacher - 2014"
2	Sadykova Gulzhan Saparovna	Candidate of medical sciences, acting docent	gulzhan2171@mail.ru	Scientific work: "Hepatoprotective effect of pannuvladine in toxic hepatitis"	Author of more than 35 scientific and scientific-methodical publications, 8 teaching aids, certificate of the highest category therapist.

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					Certificate of a specialist in general medicine
3	Baidullaev Bahram Muzaffarovich	Assistant	bbm2055@mail.ru	-	Author of over 65 scientific and scientific-methodical publications, 6 textbooks. Certificate of the highest category therapist
4	Akhaeva Laura Zhaksylykovna	Assistant	Laura1990a00@mail.ru	-	Certificate of specialist general practitioner. Author of 25 scientific publications
5	Toktarova Gulnaz Abdimalikovna	Assistant	Toktar_8585@mail.ru	-	Certificate of specialist therapist, functional diagnostics, cardiologist. Author of 8 scientific publications and co-author of 1 educational and methodological manual
6	Batkhieva Madina Bekenovna	Assistant	Madin_madina@mail.ru	-	Co-author of 1 teaching aid. International APTIS certificate. Therapist certificate
7	Tazhibaeva Azhar Bakytbekkyzy	Assistant	avril.tab@mail.ru	-	Certificate of General Practitioner Author of 29 scientific publications

Department of Pediatrics-1					
1	Kemelbekov Kanat Zhan Sauhanbekovich	PhD	Kanat-270184@mail.ru	Pediatrics, Balalar surgery	Author of more than 80 scientific publications and 3 textbooks
2	Mustafina Kenzhegul Akhmetovna	docent	sayat.mka@mail.ru	Pediatrics	Author of more than 70 scientific publications and 3 textbooks
3	Baimakhanova Bakhtygul Bimendievna	Candidate of medical sciences, acting docent	Bakhtigul059@mail.ru	Pediatrics	Author of more than 40 scientific publications and 1 manual
4	Absadyk Aidana Erseitkyzy	assistant	aidana.absadyk@mail.ru	Pediatrics	Author of scientific publications -5
5	Baltabaeva Botakoz Serikyzy	assistant	Boti.asik@mail.ru	Pediatrics	Author of scientific publications -5

8. Thematic plan							
Day	Form of classes	Name of topics	Summary	LO of the module	Number of hours	Forms/ methods/ learning technologies	Forms/ evaluation methods
1	Propaedeutics of internal diseases . Lecture 1	Methods of investigation of patients with pathology of the urinary system. Diagnostic value.	Interview of patients with pathology of the urinary system. Data from physical methods of examination of the urinary system. General examination: examination of the face, eyelids; examination of the lumbar region; assessment of the degree of kidney prolapse; palpation and percussion (method of	LO2	1	Overview lecture	Quick poll Feedback

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			shaking) of the kidneys, percussion determination of the upper border of the bladder; auscultation - a technique for listening to the renal arteries.				
	Propaedeutics of internal diseases . Practical lesson 1	Methods of investigation of patients with pathology of the urinary system. Diagnostic value.	Interview of patients with pathology of the urinary system. Data from physical methods of examination of the urinary system. General examination: examination of the face, eyelids; examination of the lumbar region; assessment of the degree of kidney prolapse; palpation and percussion (method of shaking) of the kidneys, percussion determination of the upper border of the bladder; auscultation - a technique for listening to the renal arteries.	LO2 LO3 LO4	3	Discussion of the practical lesson topic, solving situational problems, learning and performing practical skills	Oral interview checklist, assessment of practical skills
	Propaedeutics of internal diseases . SIWT/SIW 1	Laboratory methods of examination of patients with diseases of the urinary system.	Urine collection for a general urinalysis, for the Zimnitsky, Reberg sample, its indicators are normal and pathological. Principles of determining the level of creatinine, urea and residual nitrogen in blood serum, their indicators in norm and pathology.	LO2 LO3	1 / 6	Preparation and protection of presentation.	Presentation Evaluation Checklist
2	Pathological physiology. Lecture 1	Pathophysiology of the kidneys. Disorders of glomerular and tubular function	Impaired glomerular filtration and tubular reabsorption. Tubulopathies. The role of the kidneys in disorders of water-electrolyte metabolism and acid-base balance. Renal and extrarenal disorders in renal pathology. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological physiology. Practical lesson 1	Pathophysiology of the kidneys. Disorders of glomerular and tubular function	Impaired glomerular filtration and tubular reabsorption. Tubulopathies. The role of the kidneys in disorders of water-electrolyte metabolism and acid-base balance. Renal and extrarenal disorders in renal pathology. Clinical significance	LO3 LO5	3	Work in small groups, discussion of the topic, case-study	Checklist
	Pathological physiology. SIWT/SIW 1	Dysfunction of the sex glands	Dysfunction of male gonads. Hypo- and hypergonadism. Dysfunction of female gonads. Hypo- and hyperfunction of ovaries. Clinical significance	LO3 LO5	1 / 6	Case study	Checklist

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	Biochemistry. Practical lesson 1	Biochemical mechanisms of filtration and reabsorption in the kidneys.	Biochemical mechanisms of filtration and reabsorption in the kidneys. Analysis of biochemical parameters of urine.	LO3 LO5	1	seminar, situational tasks, MCQ testing	Checklist
3	Pathological anatomy . Lecture 1	Glomerulopathies	Glomerulopathies. Glomerulonephritis. Renal amyloidosis. Clinical significance. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological anatomy . Practical lesson 1	Glomerulopathies	Glomerulopathies. Glomerulonephritis. Renal amyloidosis. Clinical significance. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	2	Discussion of the topic, description of macro- and micro-preparation with the conclusion, case-study	Checklist descriptions of macro- and micropreparations, case solution checklist
	Pathological anatomy. SIWT/SIW 1	Congenital pathology of the kidneys. Kidney tumors	Congenital malformations of the kidneys. Benign and malignant tumors of the kidneys. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	1/5	Case study	Case solution shecklist
	Biochemistry. Practical lesson 2	Urolithiasis: biochemical aspects.	Urolithiasis: biochemical aspects. Study of urinary stone composition. Effect of urine pH on crystallization processes.	LO3 LO5	1	seminar, situational tasks, MCQ testing	checklist
4	Pharmacology . Lecture1	Agents affecting the function of the urinary system. Diuretics.	Classification of drugs affecting the function of the urinary system. Drugs used in nephrotic, nephritic, dysuric syndrome. Drug therapy in acute and chronic renal failure. Mechanism of action. Indications for use. Contraindications, side effects.	LO 1	1	Overview lecture.	Blitz-question Feedback
	Pharmacology . Practical lesson 1	Agents affecting the function of the urinary system.	Classification of drugs affecting the function of the urinary system. Drugs used in nephrotic, nephritic, dysuric syndrome. Drug therapy in acute and chronic renal failure.	LO 6	2	Discussion of the topic, solving situational problems, MSQ testing.	Check-list



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			Mechanism of action. Indications for use. Contraindications, side effects. Features of use in children.				
	Pharmacology . SIWT/SIW 1	Agents affecting immune processes.	Immunostimulants. Drugs from different pharmacological groups that increase nonspecific resistance of the body. Immunosuppressants. Classification. Mechanism of action and comparative characteristics of drugs. Features of use in children.	LO 6 LO 7	1/ 4	Preparation and defense of presentation, work with scientific articles	Check-list
	<b>Propaedeutics of children diseases .</b> Practical lesson 1	Research methods of sick children of different age groups with pathology of the genitourinary system.	Questioning of sick children of different ages with pathology of external genitals. Data of physical methods of research of external genitals in children. General inspection: inspection of the face, eyelids; inspection of the lumbar region; assessment of the degree of ptosis of the kidneys; palpation: technique of palpation of the kidneys and bladder; percussion: method of tapping the kidneys, percussion determination of the upper border of the bladder; auscultation method- auscultation of the renal arteries.	LO2 LO3 LO4	1	Discussion of the lesson topic, mastering practical skills	Evaluation of the oral survey, checklist mastering practical skills. Testing.
	<b>Propaedeutics of children diseases .</b> SIWT/SIW 1	Methods of laboratory research of sick children of different age groups with pathology of urinary system.	Urinalysis, CBC, Zimnitsky, Reberg samples and its indicators in the norm and pathology in children. Principles of determination of serum creatinine, urea and residual nitrogen levels, their indicators in norm and pathology in children. Principles of radioisotope radiography, diagnostic capabilities method. Preparation and technique of excretory urography, its	LO2 LO3	1/2	Preparing for the theme presentation, report	Topic presentation , report evaluation

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			indicators in the norm and pathology in children. Determination of glomerular filtration rate: calculating GFR by CKD-EPI formula. Visual examination methods: x-ray and ultrasound. The importance of endoscopic examination methods.				
5	Propaedeutics of internal b diseases . Lecture 2	The leading clinical syndromes (dysuric, nephrotic, nephritic, hypertensive and renal insufficiency) in the urinary system.	Predisposing factors and causes leading to the development of dysuric, nephrotic, nephritic, hypertensive syndromes and (acute and chronic) renal failure. Classification. Clinical and diagnostic features.	LO2	1	Overview lecture	Quick poll Feedback
	Propaedeutics of internal b diseases . Practical lesson 2	The leading clinical syndromes (dysuric, nephrotic, nephritic) in the urinary system. Diagnostic value.	Predisposing factors and causes leading to the development of dysuric, nephrotic, and nephritic syndromes. Classification. Clinical and diagnostic features.	LO2 LO3 LO4	3	Discussion of the practical lesson topic, solving situational problems	Oral interview checklist
	Propaedeutics of internal b diseases . SIWT/SIW 2	Instrumental research methods for patients with diseases of the urinary system.	Principles of radioisotope radiography, diagnostic capabilities of the method. Preparation and technique of excretory urography, its indicators are normal and pathological. Determination of glomerular filtration rate: calculated glomerular filtration rate using the CKD-EPI formula. Visual examination methods: X-ray and ultrasound. The importance of endoscopic examination methods.	LO2 LO3	1/6	Preparation and protection of presentation.	Presentation Evaluation Checklist
6	Pathological physiology. Lecture 2	Renal failure	Acute and chronic renal failure, etiology, pathogenesis, functional-metabolic disorders. Uremia, concept,	LO1	1	Overview lecture	Quick poll Feedback

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			manifestations, pathogenesis. Clinical significance				
	Pathological physiology. Practical lesson 2	Renal failure	Acute and chronic renal failure, etiology, pathogenesis, functional-metabolic disorders. Uremia, concept, manifestations, pathogenesis. Clinical significance	LO3 LO5	2	Work in small groups, discussion of the topic, case-study	Checklist
	Pathological physiology. SIWT/SIW 1	Midterm Control No. 1	Topics of lectures, practical classes, independent work, covered during 1 - 6 days of studying	LO1 LO2 LO3 LO4 LO5 LO6	1/ 6	Integrated control of educational achievements using control training cases, MCQ testing	Checklist
	Pathological anatomy. Practical lesson 2	Tubulopathies	Pyelonephritis. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	2	Discussion of the topic, description of macro- and micro-preparation with the conclusion, case-study	Checklist descriptions of macro- and micropreparations, case solution checklist
7	Pharmacology . Lecture 2	Antiviral agents.	Classification and mechanism of action of antiviral agents. Application. Biological significance, pharmacological effects and application of interferons. Interferonogens. Agents for the treatment of AIDS. Possible Side Effects.	LO 1	1	Overview lecture	Blitz-question Feedback
	Pharmacology . Practical lesson 2	Anti-inflammatory agents.	Classification of anti-inflammatory drugs (steroidal and non-steroidal anti-inflammatory drugs). NSAIDs of different chemical groups. Mechanism of action, indications, contraindications and side effects. Features of use in children.	LO 6	3	Discussion of the topic, solving situational problems, MSQ testing.	Check-list
	Pharmacology . SIWT/SIW 2	Antituberculosis agents. Antispirochetal agents.	General characterization. Classification. Mechanism of antitubercular action of drugs of different groups. Mechanism and spectrum of antibacterial	LO 6 LO 7	1/5	Preparation and defense of presentation, work with	Check-list

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			action of main and reserve drugs, their pharmacokinetics. Basic principles of therapy with antitubercular agents (duration and stage of treatment, combination therapy). Principles of prescribing antispirochetal agents. Antispirochetal properties of benzylpenicillin preparations. Mechanism of action of bismuth preparations, their use in the treatment of syphilis. Side effects. Reserve antispirochetal antibiotics: tetracycline, erythromycin, etc. Features of use in children.			scientific articles	
8	Propaedeutics of internal diseases . Practical lesson 3	The leading clinical syndromes (hypertensive and renal insufficiency) in the urinary system. Diagnostic value.	Predisposing factors and causes leading to the development of hypertensive syndrome and (acute and chronic) renal failure. Classification. Clinical and diagnostic features	LO2 LO3 LO4	2	Discussion of the practical lesson topic, solving situational problems	Oral interview checklist
	Propaedeutics of internal diseases . SIWT/SIW 3	Palpation, percussion of the kidneys, percussion determination of the upper border of the bladder; auscultation of listening to the renal arteries	Palpation and percussion (method of percussion) of the kidneys, percussion determination of the upper border of the bladder; auscultation is a technique for listening to the renal arteries	LO4	1/2	Acquisition and implementation of practical skills	Checklist, learning practical skills
	Pathological anatomy . Lecture 2	Pathological anatomy of kidney diseases. Tubulopathies	Tubulopathy. Pyelonephritis. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO1	1	Overview lecture	Quick poll Feedback
	Pathological anatomy . Practical lesson 3	Pathological anatomy of kidney diseases. Renal failure	Acute and chronic renal failure. Nephrosclerosis. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications.	LO3 LO5	1	Discussion of the topic, description of macro- and micro-preparation	Checklist descriptions of macro- and micropreparations, case

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			Causes of death. Clinical significance			with the conclusion, case-study	solution checklist
	Pathological anatomy. SIWT/SIW 2	Pathology of pregnancy and postpartum period	Gestosis. Tumors and tumor-like changes in the trophoblast. Ectopic pregnancy. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	1/4	Case study	Case Solution Checklist
9	Pharmacology . Practical lesson 3	Antiviral agents. Antifungal agents.	Classification and mechanism of action of antiviral agents. Application. Biological significance, pharmacological effects and application of interferons. Interferonogens. Agents for the treatment of AIDS. Possible side effects. Features of use in children. Classification of antifungal agents. Comparative characteristics of drugs. Application. Possible complications and their prevention.	LO 6	3	Discussion of the topic, solving situational problems, MSQ testing.	Check-list
	Pharmacology . SIWT/SIW 3	Antiprotozoal agents. Anthelmintic agents.	Classification, mechanism of action of drugs used for the treatment of malaria, amoebiasis, trichomoniasis, leishmaniasis, etc. Classification of anthelmintic agents. Mechanism of action. Indications for use. Contraindications. Features of use in children.	LO 6 LO 7	1/5	Preparation and defense of presentation, work with scientific articles	Check-list
	Biochemistry. Lecture1	The urogenital system in pathology.	The urogenital system in pathology.	LO3 LO5	1	Review	Feedback
	Biochemistry. Practical lesson 3	Biochemical markers of chronic kidney disease.	Biochemical markers of chronic kidney disease (CKD). Determination of urea, creatinine and cystatin C levels. Study of inflammation markers in CKD.	LO3 LO5	1	seminar, situational tasks, MCQ testing	Check-
10	<b>Propaedeutics of children diseases .</b> Lecture 1	Diagnosis of the main syndromes (disorders) of the urinary system in children	Symptoms of syndromes: urinary, nephrotic, nephritic, AKF, CKF.	LO2	1	Overview	Feedback

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	<b>Propaedeutics of children diseases.</b> Practical lesson 2	Clinical and laboratory characteristics of urinary, dysuric, nephritic and nephrotic syndromes in children of different age groups.	The main symptoms of urinary, dysuric, nephritic and nephrotic syndrome, acute and chronic kidney damage in children of different age groups. Methods and preparation of patients for laboratory and instrumental examination with urinary, dysuric, nephritic and nephrotic syndrome.	LO2 LO3 LO4	3	Discussion of the lesson topic, mastering practical skills	Evaluation of the oral survey, checklist mastering practical skills. Testing.
	<b>Propaedeutics of children diseases.</b> SIWT/SIW 2	Anomalies in the development of the urinary system. Sex formation and maturation.	Anomalies in the development of the urinary system.  Sex formation and maturation. Classification. Estimates of puberty.	LO2 LO3	1/5	Preparing for the theme presentation, report	Topic presentation, report evaluation
11	Pathological anatomy. Practical lesson 4	Pathology of the male reproductive system	Prostatitis. Prostatic hyperplasia. Prostate cancer. Testicular tumors. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5	3	Discussion of the topic, description of macro- and micro-preparation with the conclusion, case-study	Checklist descriptions of macro- and micropreparations, case solution checklist
	Pathological anatomy . SIWT/SIW 3	Pathology of the female reproductive system	Endometritis. Dyshomonal changes in the endometrium. Endometriosis. Uterine cancer. Ovarian tumors. Etiology. Pathogenesis. Morphogenesis. Pathological anatomy. Complications. Causes of death. Clinical significance	LO3 LO5 LO7	1/5	Case-study	Case Solution Checklist
12	Pathological physiology. Practical lesson 3	Nephrotic Syndrome	Nephrotic syndrome, concept, types, etiology, pathogenesis, manifestations, complications. Differences between nephrotic and nephritic syndromes. Nephrolithiasis, concept, manifestations. Causes and mechanisms of formation of urinary stones. Clinical significance	LO3 LO5	3	Work in small groups, discussion of the topic, case-study	Checklist

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	Pathological physiology. SIWT/SIW 3	Midterm control No. 2	Topics of the lectures, practical classes, independent work covered during 7-12 days of training	LO1 LO2 LO3 LO4 LO5 LO6	1/ 2	Integrated control of educational achievements using control training cases, MCQ testing	Checklist
	Biochemistry. Practical lesson 3				1		
	Biochemistry. SIWT/SIW 2				1/7		

8.1	Interim assessment						15 hours
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<b>9.</b>	<b>Teaching methods</b>						
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9.1	Lectures	Overview lectures					
9.2	Practical classes	Work in small groups, discussion of the topic, oral questioning (solving situational problems), writing out prescriptions, case studies, description of macro- and micropreparations with a conclusion, implementation of practical skills, interpretation of clinical laboratory test results, discussion of the topic,					
9.3	SIWT/SIW	Case study, analysis of scientific articles, project implementation Presentation defense and practical skills implementation, discussion of the topic, solutions to test cases					
9.4	Border control	Integrated monitoring of educational achievements using control educational cases , testing					

<b>10.</b>	<b>Evaluation criteria</b>						
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<b>10.1</b>	<b>Criteria for assessing the learning outcomes of the discipline</b>						
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No. LO	Name of learning outcomes	Unsatisfactory	Satisfactory	Good	Excellent
LO1	Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of pathology of the urogenital system	1. Does not know the basics of semiotics and syndromology, does not identify symptoms and syndromes. 2. Cannot explain the etiology , pathogenesis and morphogenesis of pathological changes in the urogenital system	1. Does not have a basic understanding of semiotics and syndromology, makes gross mistakes in determining symptoms and syndromes in pathologies of the urogenital system. 2. Makes mistakes when explaining etiology, pathogenesis and morphogenesis of	1. Has a basic understanding of semiotics and syndromology, and can identify symptoms and syndromes. 2. Explains the etiology, pathogenesis and morphogenesis of pathological changes in the urogenital system, but allows for	1. Fluently masters the basics of semiotics and syndromology, independently identifies symptoms and syndromes. 2. Freely explains the etiology , pathogenesis and morphogenesis of pathological changes

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			pathological changes in the urogenital system	fundamental inaccuracies	in the urogenital system
LO2	Has knowledge of methods of conducting questioning, physical examination of adults and children, uses clinical thinking in collecting information when drawing up an examination plan; outlines the scope of basic and additional studies to clarify the syndrome of damage in pathology of the urogenital system	Does not know the basic physiological processes in the kidneys and urinary tract, does not understand the regulation of urine formation and urine excretion. Unable to explain the mechanisms filtration, reabsorption and secretion.	Makes mistakes when describing the basic physiological processes in the kidneys and urinary tract, explaining the regulation of excretory functions of the body. Able to explain with mistakes the mechanisms urine formation.	Describes the basic physiological processes in the kidneys and urinary tract, understands the regulation of excretory functions of the body. Is able to fully explain the mechanisms of urine formation.	Demonstrates the basic physiological processes in kidneys and urinary tract, has a deep understanding of the regulation of excretory functions of the body. Is able to draw the mechanisms of urine formation.
LO3	Uses clinical thinking in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathology of the genitourinary system, formulates a syndromic diagnosis , fills out a medical history	Does not know the main metabolic pathways that affect the function of the urogenital system . Doesn't understand biochemical processes	Does not fully understand the main metabolic pathways that affect the function of the urogenital system. Poor understanding of biochemical processes associated with energy metabolism	Explains the main metabolic pathways that affect the function of the urogenital system. Has a good understanding and knowledge of the biochemical processes associated with energy metabolism.	Possesses clinical thinking skills, applies knowledge in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathology of the urogenital system, formulates a syndromic diagnosis, fills out a medical history. Effectively solves situational tasks.
LO4	Communicates information, ideas, problems and solutions to patients and their family members, and is proficient in ethical and deontological practices when interacting with	Does not know how to apply knowledge of the urogenital system in a clinical context, has not acquired the skills to collect a clinical history and perform a physical examination of patients with diseases of the urogenital system to	Does not fully know how to apply knowledge about the urogenital system in a clinical context, collects clinical anamnesis and physical examination of patients with diseases of the genitourinary system to provide first aid with	Lists information about the genitourinary system in a clinical context, collects a clinical history and physical examination of patients with diseases of the genitourinary system with the	Freely demonstrates knowledge of the urogenital system in a clinical context, collects clinical history and physical examination of patients with diseases of the genitourinary system with the



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	patients, their relatives and colleagues	provide first aid, does not able to interpret the results of laboratory and instrumental studies	errors, poorly oriented in interpreting the results of laboratory and instrumental studies	provision of first aid, is well oriented in the interpretation of the results of laboratory and instrumental studies	provision of first aid, has excellent orientation in the interpretation of the results of laboratory and instrumental studies
LO5	Determines pathological processes at the organ and cellular levels, interprets data on the pathophysiology and morphology of diseases taking into account the clinical data of patients, makes conclusions, explains the patterns of development of complications and outcomes of pathology of the genitourinary system, evaluates the results of experimental studies	<p>1. Is unable to identify pathological processes at the organ and cellular levels, makes gross mistakes.</p> <p>2. Cannot interpret data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients.</p> <p>3. Makes erroneous conclusions, has poor orientation and does not explain the patterns of development of complications and outcomes of pathology of the urogenital system.</p> <p>4. Is unable to evaluate the results of experimental studies and makes fundamental mistakes.</p> <p>5. Incapable of solving situational tasks.</p>	<p>1. Determines pathological processes at the organ and cellular levels, but makes gross errors.</p> <p>2. Cannot independently interpret data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients.</p> <p>3. Makes erroneous conclusions, finds it difficult to independently explain the patterns of development of complications and outcomes of pathology of the urogenital system.</p> <p>4. Finds it difficult to evaluate the results of experimental studies and makes fundamental inaccuracies.</p> <p>5. Solves situational tasks, but makes fundamental mistakes</p>	<p>1. Determines pathological processes at the organ and cellular levels.</p> <p>2. Interprets data on the etiology, pathophysiology and morphology of diseases, taking into account the clinical data of patients.</p> <p>3. Draws conclusions, explains the patterns of development of complications and outcomes of pathology of the urogenital system.</p> <p>4. Appreciates the results of experimental studies, but allows for minor inaccuracies.</p> <p>5. Solves situational tasks.</p>	<p>1. Independently identifies pathological processes at the organ and cellular levels.</p> <p>2. Independently interprets data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients.</p> <p>3. Draws conclusions, explains the patterns of development of complications and outcomes of pathology of the genitourinary system.</p> <p>4. Evaluates the results of experimental research.</p> <p>5. Effectively solves situational tasks.</p>

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LO6	Selects medications in accordance with the diagnosis, writes prescriptions, determines the dosage mode, recognizes adverse effects of medications, predicts the development of side effects and interactions of medications used in pathology of the urogenital system	<ol style="list-style-type: none"> <li>1. It defines a general pharmacological group of drugs.</li> <li>2. Write a recipe with errors.</li> </ol>	<ol style="list-style-type: none"> <li>1. Selects a pharmacological group of drugs by organs and systems.</li> <li>2. Write a recipe using reference literature/sources.</li> </ol>	<ol style="list-style-type: none"> <li>1. Selects medications for the treatment and prevention of the most common diseases.</li> <li>2. Writes out a prescription for the specified medication without errors .</li> <li>3. Calculates the dose of the drug</li> </ol>	<ol style="list-style-type: none"> <li>1. Selects drugs from various pharmacological groups in accordance with indications for use, contraindications and side effects</li> <li>2. Write a recipe for medications in the most appropriate dosage form depending on age, gender, and functional characteristics.</li> <li>3. Calculates doses using various methods and determines the frequency and duration of use of the drug.</li> </ol>
LO7	Analyzes professional literature when working with scientific articles, carries out a project, demonstrates a desire for continuous improvement of their activities	<ol style="list-style-type: none"> <li>1. Does not have research skills.</li> <li>2. Does not have a desire for continuous self-education and development</li> </ol>	<ol style="list-style-type: none"> <li>1 . Cannot analyze the topics of classes.</li> <li>2. Participates in the implementation of the project.</li> <li>3. Violates deadlines for completing tasks.</li> </ol>	<ol style="list-style-type: none"> <li>1. Analyzes scientific articles on the topics of the lesson.</li> <li>2. Participates in the implementation of the project.</li> <li>3. Completes assignments on time.</li> </ol>	<ol style="list-style-type: none"> <li>1. Analyzes scientific articles on the topics of the lesson.</li> <li>2. Uses international databases at work</li> <li>3. Successfully defends the completed project.</li> <li>4. Demonstrates motivation for independent work, creative approach to completing tasks</li> </ol>

## 10.2 Methods and criteria for evaluation

### Checklist for assessing a lesson

Form of control	Grade	Evaluation criteria
Performing practical skills	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- The student is well-versed in questioning and examining patients. Correctly and accurately selects questions when collecting anamnesis, accurately analyzes primary and secondary complaints, and is well-versed in the collected anamnesis of life and disease.</li> <li>- Accurately performs a basic physical examination: general examination, palpation, percussion, auscultation, measurement of blood pressure, determination of pulse characteristics, respiratory rate, etc. ) in children and adolescents.</li> <li>- Conducts correct linking of objective physical examination data (palpation, auscultation, percussion), correctly interprets laboratory and instrumental examination data.</li> <li>- Able to evaluate pathophysiological patterns of research results. Finds and compares the connection between the main symptoms and syndromes.</li> <li>- Substantiates and establishes a presumptive syndrome-based diagnosis.</li> <li>- Used additional literature when preparing for the lesson. - Systematizes the material on the given topic.</li> <li>- Effectively communicates in medical practice, objectively conveys relevant information, knows</li> </ul>


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		and uses the norms of ethics and deontology when performing the skill;
	<p>Good corresponds to points 85-89 80-84 75-79 70-74</p>	<p>- The student differentiates between primary and secondary complaints well, is well oriented in the collected anamnesis of life and disease. Is well oriented when questioning and examining patients, but allows minor inaccuracies or fundamental errors, corrected by the student himself.</p> <p>- Accurately performs a basic physical examination: general examination, palpation, percussion, auscultation, blood pressure measurement, determination of pulse characteristics, respiratory rate, etc. of children and adolescents. Incapable of correctly interpreting examination results. Does not accurately convey appropriate information;</p> <p>- Links data from objective physical examination (palpation, auscultation, percussion), and incorrectly interprets data from laboratory and instrumental studies.</p> <p>- Has errors in assessing pathophysiological patterns based on research results. Finds and compares the relationship between the main symptoms and syndromes. Establishes a presumptive syndrome-based diagnosis without substantiating the data</p>
	<p>Satisfactory corresponds to points 65-69 60-64 50-54</p>	<p>- The student is able to navigate when questioning and examining patients, <u>differentiates between</u> primary and secondary complaints with errors, and is poorly <u>oriented</u> in the collected anamnesis of life and illness.</p> <p>- Makes mistakes when conducting a physical examination (palpation, percussion, auscultation and general examination) and demonstrates incomplete knowledge of the material on the given topic, while making fundamental mistakes.</p> <p>- <u>Links</u> data from objective physical examination (palpation, auscultation, percussion), correctly <u>interprets</u> data from laboratory and instrumental studies. Has errors in assessing examination results.</p> <p>- Is unable <u>to evaluate</u> pathophysiological patterns of research results. <u>Is unable to determine</u> the relationships between the main symptoms and syndromes. <u>Establishes</u> a presumptive syndrome-based diagnosis without substantiating the data.</p> <p>- Has a low level of communication skills in medical practice; subjectively conveys appropriate information;</p>
	<p>Unsatisfactory corresponds to points 25-49</p>	<p>- The student has no idea about the main and secondary complaints, and is not <u>oriented</u> in the collected anamnesis of life and illness.</p> <p>- Is unable to carry out practical skills to interpret their results. <u>Cannot determine the relationship of</u> objective physical examination data (palpation, auscultation, percussion), incorrectly <u>interprets</u> laboratory and instrumental examination data .</p>
	<p>Unsatisfactory corresponds to points 0-24</p>	<p>- Does not know how <u>to evaluate</u> pathophysiological patterns of research results. <u>Does not find and is not able to compare</u> the relationship between the main symptoms and syndromes. Establishes a presumptive syndrome-based diagnosis without substantiating the data</p> <p>- Does not participate in the work of the group. Is not able to communicate in medical practice; does not convey proper information, does not know and is not able to use the norms of ethics and deontology when performing the skill. When answering the teacher's questions, gross errors, not using specific terminology in answers.</p>
Case study	<p>Excellent corresponds to points 95-100 90-94</p>	<p>- solved cases within a certain time; - gave full answers to all questions</p> <p>Demonstrates original thinking when analyzing a situational task. Fully utilizes theoretical knowledge necessary to solve a given task. Demonstrates excellent knowledge of reference biochemical parameters when interpreting the proposed biofluid analysis data. Demonstrates the ability to draw logical conclusions on a situational task, while demonstrating a deep understanding of the necessary educational material.</p>
	<p>Good corresponds to points 85-89 80-84 75-79 70-74</p>	<p>- solved cases within a certain time; - gave complete answers to all questions; - made minor mistakes when solving cases</p> <p>Possesses the necessary knowledge to solve this situational task. Allows for minor inaccuracies when discussing this case. Is able to draw correct conclusions on the proposed situational task.</p>

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	Satisfactory corresponds to points 65-69 60-64 50-54	<ul style="list-style-type: none"> <li>- solved cases within a certain time;</li> <li>- gave incomplete answers to questions;</li> <li>- made fundamental mistakes when solving cases</li> </ul> <p>Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty</p>
	Unsatisfactory corresponds to points 25-49	<ul style="list-style-type: none"> <li>- solved cases incorrectly or did not solve them at all;</li> <li>- made gross mistakes when solving cases</li> </ul> <p>Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.</p>
	Unsatisfactory corresponds to points 0-24	
<b>Interpretation of clinical laboratory test results</b>	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- correctly, without any errors, interprets the results of clinical laboratory tests;</li> <li>- made a reasoned conclusion</li> </ul>
	Good corresponds to points 85-89 80-84 75-79 70-74	<ul style="list-style-type: none"> <li>- correctly interprets the results of clinical laboratory tests, making minor errors;</li> <li>- makes a reasoned conclusion</li> </ul>
	Satisfactorily corresponds to points 65-69 60-64 50-54	<ul style="list-style-type: none"> <li>- correctly interprets the results of clinical laboratory studies, having made fundamental mistakes;</li> <li>- makes an unfounded conclusion</li> </ul>
	Unsatisfactory corresponds to points 25-49	<ul style="list-style-type: none"> <li>- incorrectly interprets the results of clinical laboratory tests, making gross errors;</li> <li>- doesn't not draw a conclusion</li> </ul>
	Unsatisfactory corresponds to points 0-24	
<b>Description of the macropreparation</b>	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- names the organ correctly and indicated its dimensions,</li> <li>- describes the surface: the condition of the capsule or serous membrane, dimness, shininess, plaque on a surface;</li> <li>- gives a description of the pathological focus: indicates the location, size, shape (if it is an ulcer - the condition of the bottom), color, consistency;</li> <li>- makes the correct pathological conclusion/diagnosis</li> </ul>
	Good corresponds to points 85-89 80-84	<ul style="list-style-type: none"> <li>- correctly names the organ, indicated the dimensions, describes the surface: condition of the capsule or serous membrane, dimness, shininess, plaque on a surface;</li> <li>- gives a description of the pathological focus: indicates the location, size, shape (if it is an ulcer – the condition of the bottom), color, consistency;</li> </ul>

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	75-79 70-74	-makes the correct pathological conclusion/diagnosis, but during the answer makes minor mistakes and inaccuracies
	Satisfactorily corresponds to points 65-69 60-64 50-54	- correctly names the organ, does not indicate the dimensions, does not fully describe the surface: does not describe the condition of the capsule or serous membrane, dimness, shiness, plaque on a surface; - gives an incomplete description of the pathological focus: does not indicate indicated location, size, shape (if it is an ulcer - condition of the bottom), color, consistency; - makes the correct pathological conclusion/diagnosis, but during the answer makes fundamental mistakes and inaccuracies
	Unsatisfactorily corresponds to points 25-49	- correctly names the organ, does not indicate the size, does not describe the surface: does not describe the condition of the capsule or serous membrane, dimness, shiness, plaque on a surface; - gives an incorrect description of the pathological focus: does not indicate indicated location, size, shape (if it is an ulcer - condition of the bottom), color, consistency; - makes the correct pathological conclusion/diagnosis, but during the answer made fundamental mistakes and inaccuracies
	Unsatisfactorily corresponds to points 0-24	- incorrectly names the organ, does not indicate the size, does not describe the surface: does not describe the condition of the capsule or serous membrane, dimness, shiness, plaque on a surface; - gives an incorrect description of the pathological focus: does not indicate indicated location, size, shape (if it is an ulcer - condition of the bottom), color, consistency; - makes an incorrect pathological conclusion/diagnosis, makes gross errors during the answer, leaves some questions unanswered
<b>Description of the microslide</b>	Excellent corresponds to points 95-100 90-94	-correctly names the organ or tissue, correctly characterizes pathological changes: localization, made a description, named the color; -makes the correct pathological conclusion/diagnosis
	Good corresponds to points 85-89 80-84 75-79 70-74	-correctly names the organ or tissue, correctly characterizes pathological changes: localization, makes a description, named the color; -makes the correct pathological conclusion/diagnosis, but during the answer makes minor mistakes and inaccuracies
	Satisfactorily corresponds to points 65-69 60-64 50-54	- correctly names the organ or tissue, incorrectly characterizes the pathological changes: localization, made a description, incorrectly named the color; - makes the correct pathological conclusion/diagnosis, but during the answer makes fundamental mistakes and inaccuracies
	Unsatisfactorily corresponds to points 25-49	- correctly names an organ or tissue, incorrectly characterizes pathological changes: localization, made a description, incorrectly named the color; -makes the correct pathological conclusion/diagnosis, makes gross errors during the answer
	Unsatisfactorily corresponds to points 0-24	- incorrectly names an organ or tissue, incorrectly characterizes pathological changes: localization, makes a description, incorrectly names the color; - makes an incorrect pathological conclusion/diagnosis, makes gross mistakes during the answer, leaves some questions unanswered
<p>ONTÜSTİK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ</p>  <p>SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицина академия»</p>		

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<b>Prescription writing</b>	<b>Excellent</b> Corresponds to ratings: A (4.0; 95-100%); A- (3.67; 90-94%)	Writes a prescription for medicines in the most appropriate dosage form depending on age, gender, and functional characteristics. Writes out a prescription for the selected medicine without errors. Calculates doses using various methods and determines the frequency and duration of use of the medicine.
	<b>Good</b> Corresponds to ratings: B+ (3.33; 85-89%) B (3.0; 80-84%) B- (2.67; 75-79%) C+ (2.33; 70-74%)	Writes a prescription for the selected medication without errors. Calculates the dose of the medicine. Limited to general indications "Internal", "External".
	<b>Satisfactory</b> Corresponds to ratings: C (2.0; 65-69%) C- (1.67; 60-64%) D+ (1.33; 55-59%) D- (1.0; 50-54%)	Writes a prescription using reference literature/sources. Allows corrections to the prescription.
	<b>Unsatisfactory</b> FX (0.5; 25-49%) F (0; 0-24%)	Writes a prescription with errors.
<b>Checklist for SIWT/SIW</b>		
<b>Analysis of a scientific article</b>	Excellent corresponds to points 95-100 90-94	- independently substantiated and argued the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - freely presented the semantic content of the scientific article; -argued and substantiated conclusions; - had the skill of using literature and justifying the selected list of references in this article
	Good corresponds to points 85-89 80-84 75-79 70-74	- substantiated and argued the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - outlined the semantic content of the scientific article; -argued and substantiated conclusions; - had the skill of using literature and justifying the selected list of references in this article; - when answering, he made minor mistakes and inaccuracies
	Satisfactory corresponds to points 65-69 60-64 50-54	- found it difficult to justify and argue the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work; - had difficulty expressing the semantic content of a scientific article; - had difficulty arguing and substantiating conclusions; - had the skill of using literature and justifying the selected list of references in this article; - when answering, he made fundamental mistakes and inaccuracies
	Unsatisfactory	- found it difficult to justify and argue the relevance of the problem; - explained the purpose of the work, the materials and methods used in the work;

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	corresponds to points 25-49	<ul style="list-style-type: none"> <li>- had difficulty expressing the semantic content of a scientific article;</li> <li>- had difficulty arguing and substantiating conclusions;</li> <li>- failed to demonstrate the skill of using literature and justifying the selected list of literature in this article;</li> <li>- made gross mistakes when answering</li> </ul>
	Unsatisfactory corresponds to points 0-24	<ul style="list-style-type: none"> <li>- found it difficult to justify and argue the relevance of the problem;</li> <li>- could not explain the purpose of the work, the materials and methods used in the work;</li> <li>- was unable to convey the semantic content of a scientific article;</li> <li>- was unable to argue and justify the conclusions;</li> <li>- failed to demonstrate the skill of using literature and justifying the selected list of literature in this article;</li> <li>- made gross mistakes when answering</li> </ul>
<b>Discussion of the topic</b>	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- did not make any mistakes during the discussion;</li> <li>- was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment;</li> <li>- used scientific achievements of other disciplines</li> </ul>
	Good corresponds to points 85-89 80-84 75-79 70-74	<ul style="list-style-type: none"> <li>- during the discussion he did not make any gross mistakes, but he did make inaccuracies and minor errors, which he corrected himself;</li> <li>- managed to systematize the program material with the help of the teacher</li> </ul>
	Satisfactory corresponds to points 65-69 60-64 50-54	<ul style="list-style-type: none"> <li>- made fundamental mistakes during the discussion;</li> <li>- limited himself to only the educational literature specified by the teacher;</li> <li>- experienced great difficulty in systematizing the material</li> </ul>
	Unsatisfactory corresponds to points 25-49	<ul style="list-style-type: none"> <li>- made gross mistakes during the discussion;</li> <li>- did not study the basic literature on the topic of the lesson;</li> <li>- failed to use the scientific terminology of the discipline</li> </ul>
	Unsatisfactory corresponds to points 0-24	

#### Checklist for midterm assessment

**Testing** - testing is assessed using a multi-point knowledge assessment system.

Form of control	Grade	Evaluation criteria
in carrying out practical work	Excellent corresponds to points 95-100 90-94	<p>The student is well-versed in questioning and examining patients. Correctly and accurately selects questions when collecting anamnesis, accurately analyzes primary and secondary complaints, and is well-versed in the collected anamnesis of life and disease.</p> <ul style="list-style-type: none"> <li>- Accurately performs a basic physical examination: general examination, palpation, percussion, auscultation, measurement of blood pressure, determination of pulse characteristics, respiratory rate, etc. ) in children and adolescents.</li> <li>- Conducts correct linking of objective physical examination data (palpation, auscultation, percussion), correctly interprets laboratory and instrumental examination data.</li> <li>- Able to evaluate pathophysiological patterns of research results. Finds and</li> </ul>

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		compares the connection between the main symptoms and syndromes. - Substantiates and establishes a presumptive syndrome-based diagnosis. - Used additional literature when preparing for the lesson. - Systematizes the material on the given topic. - Effectively communicates in medical practice, objectively conveys relevant information, knows and uses the norms of ethics and deontology when performing the skill;
	Good corresponds to points 85-89 80-84 75-79 70-74	The student differentiates between primary and secondary complaints well, is well oriented in the collected anamnesis of life and disease. Is well oriented when questioning and examining patients, but allows minor inaccuracies or fundamental errors, corrected by the student himself. - Accurately performs a basic physical examination: general examination, palpation, percussion, auscultation, blood pressure measurement, determination of pulse characteristics, respiratory rate, etc. of children and adolescents. Incapable of correctly interpreting examination results. Does not accurately convey appropriate information; - Links data from objective physical examination (palpation, auscultation, percussion), and incorrectly interprets data from laboratory and instrumental studies. - Has errors in assessing pathophysiological patterns based on research results. Finds and compares the relationship between the main symptoms and syndromes. Establishes a presumptive syndrome-based diagnosis without substantiating the data
	Satisfactory corresponds to points 65-69 60-64 50-54	- The student is able to navigate when questioning and examining patients, <u>differentiates between</u> primary and secondary complaints with errors, and is poorly <u>oriented</u> in the collected anamnesis of life and illness. - Makes mistakes when conducting a physical examination (palpation, percussion, auscultation and general examination) and demonstrates incomplete knowledge of the material on a given topic, while making fundamental mistakes. - <u>Links</u> data from objective physical examination (palpation, auscultation, percussion), correctly <u>interprets</u> data from laboratory and instrumental studies. Has errors in assessing examination results. - Is unable <u>to evaluate</u> pathophysiological patterns of research results. <u>Is unable to determine</u> the relationships between the main symptoms and syndromes. <u>Establishes</u> a presumptive syndrome-based diagnosis without substantiating the data. - Has a low level of communication skills in medical practice; subjectively conveys appropriate information;
	Unsatisfactory corresponds to points 25-49	- The student has no idea about the main and secondary complaints, and is not <u>oriented</u> in the collected anamnesis of life and illness. - Is unable to carry out practical skills to interpret their results. <u>Cannot determine the relationship of</u> objective physical examination data (palpation, auscultation, percussion), incorrectly <u>interprets</u> laboratory and instrumental examination data. - Does not know how <u>to evaluate</u> pathophysiological patterns of research results. <u>Does not find and is not able to compare</u> the relationship between the main symptoms and syndromes. Establishes a presumptive syndrome-based diagnosis without substantiating the data - Does not participate in the work of the group. Is not able to communicate in medical practice; does not convey proper information, does not know and is not able to use the norms of ethics and deontology when performing the skill. When answering the teacher's questions, gross errors, not using specific terminology in answers.
	Unsatisfactory corresponds to points 0-24	



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Case - study	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- solved cases within a certain time;</li> <li>- gave full answers to all questions</li> </ul> <p>Demonstrates original thinking when analyzing a situational task. Fully utilizes theoretical knowledge necessary to solve a given task. Demonstrates excellent knowledge of reference biochemical parameters when interpreting the proposed biofluid analysis data. Demonstrates the ability to draw logical conclusions on a situational task, while demonstrating a deep understanding of the necessary educational material.</p>
	Good corresponds to points 85-89 80-84 75-79 70-74	<ul style="list-style-type: none"> <li>- solved cases within a certain time;</li> <li>- gave complete answers to all questions;</li> <li>- made minor mistakes when solving cases</li> </ul> <p>Possesses the necessary knowledge to solve this situational task. Allows for minor inaccuracies when discussing this case. Is able to draw correct conclusions on the proposed situational task.</p>
	Satisfactory corresponds to points 65-69 60-64 50-54	<ul style="list-style-type: none"> <li>- solved cases within a certain time;</li> <li>- gave incomplete answers to questions;</li> <li>- made fundamental mistakes when solving cases</li> </ul> <p>Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty</p>
	Unsatisfactory corresponds to points 25-49	<ul style="list-style-type: none"> <li>- solved cases incorrectly or did not solve them at all;</li> <li>- made gross mistakes when solving cases</li> </ul> <p>Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.</p>
	Unsatisfactory corresponds to points 0-24	
Interpretation of clinical laboratory test results	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- correctly, without any errors, interpreted the results of clinical laboratory tests;</li> <li>- made a reasoned conclusion</li> </ul>
	Good corresponds to points 85-89 80-84 75-79 70-74	<ul style="list-style-type: none"> <li>- correctly interpreted the results of clinical laboratory tests, making minor errors;</li> <li>- made a reasoned conclusion</li> </ul>
	Satisfactory corresponds to points 65-69 60-64 50-54	<ul style="list-style-type: none"> <li>- correctly interpreted the results of clinical laboratory studies, having made fundamental mistakes;</li> <li>- made an unfounded conclusion</li> </ul>
	Unsatisfactory corresponds to points 25-49	<ul style="list-style-type: none"> <li>- incorrectly interpreted the results of clinical laboratory tests, making gross errors;</li> <li>- did not draw a conclusion</li> </ul>
	Unsatisfactory corresponds to points 0-24	
Discussion of the topic	Excellent corresponds to points 95-100 90-94	<ul style="list-style-type: none"> <li>- did not make any mistakes during the discussion;</li> <li>- was oriented in the theories, concepts and directions of the discipline and gave them a critical assessment;</li> <li>- used scientific achievements of other disciplines</li> </ul>

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	<p style="text-align: center;">Good corresponds to points 85-89 80-84 75-79 70-74</p>	<p>- during the discussion he did not make any gross mistakes, but he did make inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher</p>
	<p style="text-align: center;">Satisfactory corresponds to points 65-69 60-64 50-54</p>	<p>- made fundamental mistakes during the discussion; - limited himself to only the educational literature specified by the teacher; - experienced great difficulty in systematizing the material</p>
	<p style="text-align: center;">Unsatisfactory corresponds to points 25-49</p>	<p>- made gross mistakes during the discussion; - did not study the basic literature on the topic of the lesson; - failed to use the scientific terminology of the discipline</p>
	<p style="text-align: center;">Unsatisfactory corresponds to points 0-24</p>	
MCQ testing	<p style="text-align: center;">Excellent corresponds to points 95-100 90-94</p>	- correctly completed 90-100% of test tasks
	<p style="text-align: center;">Good corresponds to points 85-89 80-84 75-79 70-74</p>	- did it correctly 70-89% of test tasks
	<p style="text-align: center;">Satisfactory corresponds to points 65-69 60-64 50-54</p>	- did it correctly 50-69% of test tasks
	<p style="text-align: center;">Unsatisfactory corresponds to points 25-49</p>	- performed less correctly 50% of test tasks
	<p style="text-align: center;">Unsatisfactory corresponds to points 0-24</p>	

**Checklist for assessing answers to descriptions of macropreparations**

No.	Evaluation Criteria/Evaluation	Excellent	Good	Satisfactory	Unsatisfactory
1	Name of the organ	4	3	2	0
2	Organ size	10	7	5	0
3	Surface: condition of the capsule or serous membrane, dimness, shininess, plaque on a surface	1	1	1	0
4	Characteristics of the pathological focus: localization, size, shape (if ulcer- condition of the bottom), color, consistency	5	4	2	0
5	Pathological diagnosis/conclusion				
6	Total	20	15	10	0

**Checklist for assessment answers on the description of micropreparations**

No.	Evaluation Criteria/Evaluation	Excellent	Good	Satisfactory	Unsatisfactory
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1	Name of an organ or tissue	4	3	2	0
2	Characteristics of pathological changes: localization, description	10	7	5	0
3	Coloring	1	1	1	0
4	Pathological diagnosis/conclusion	5	4	2	0
5	Total	20	15	10	0

#### Checklist for assessing the analysis of scientific articles

Score in points by %	Unsatisfactory (0-49%)	Satisfactory (65-54%)	Good (70-89%)	Excellent (90-100%)
Evaluation criteria				
<b>Structure of the article</b>	1. Does not name the structural components of a scientific article	1. Does not follow the order of the structure of the scientific article when listing, skips components	1. Lists the structural components of a scientific article, but violates the order of the structure	1. Observes the order of the structure of a scientific article when listing: - Name - Authors - Publishing house - Summary - General part (introduction, purpose, materials and methods, results and discussion) - Conclusions - Bibliography
<b>Analysis of the content of a scientific article</b>	1. Does not understand the relevance of the problem, is not capable of discussing the content of the article	1. Understands the relevance of the problem 2. Lists the purpose of the work, the materials and methods used in the work 3. Understands the content of a scientific article 4. Lists the conclusions and bibliography in this article	1. Assumes the relevance of the problem 2. Explains the purpose of the work, the materials used in the work and methods presents the content of a scientific article 3. Justifies the conclusions 4. Justifies the selected list of references in this article	1. Independently substantiates and argues the relevance of the problem 2. Explains the purpose of the work, the materials and methods used in the work 3. Freely expresses the semantic content of a scientific article 4. Argues and justifies conclusions 5. Has the skill of using literature and justifies the selected list of literature in this article
<b>Answer to additional questions (on the topic of the article for the discipline)</b>	1. Does not answer additional questions on the topic	1. Does not understand the problem at hand when answering additional questions	1. Apply the knowledge gained during the practical lesson on the topic when answering additional questions	1. Applies the knowledge gained during the practical lesson on the topic when answering additional questions, provides a deep and comprehensive argumentation

#### Multi-point knowledge assessment system

Letter Grading	Digital equivalent of points	Percentage content	Traditional system assessment
A	4.0	95-100	Excellent
A -	3.67	90-94	

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B +	3.33	85-89	Fine
IN	3.0	80-84	
IN -	2.67	75-79	
C +	2.33	70-74	Satisfactory
C	2.0	65-69	
C -	1.67	60-64	
D+	1.33	55-59	
D-	1.0	50-54	Unsatisfactory
FX	0, 5	25-49	
F	0	0-24	

11. Educational resources	
Electronic resources	<ol style="list-style-type: none"> <li>1. Electronic library of YUKMA - <a href="https://e-lib.skma.edu.kz/genres">https://e-lib.skma.edu.kz/genres</a></li> <li>2. Republican Interuniversity Electronic Library (RIEL) – <a href="http://rmebrk.kz/">http://rmebrk.kz/</a></li> <li>3. Digital library " Aknurpress " - <a href="https://www.aknurpress.kz/">https://www.aknurpress.kz/</a></li> <li>4. Electronic library "Epigraph" - <a href="http://www.elib.kz/">http://www.elib.kz/</a></li> <li>5. Epigraph - portal of multimedia textbooks <a href="https://mbook.kz/ru/index/">https://mbook.kz/ru/index/</a></li> <li>6. EBS IPR SMART <a href="https://www.iprbookshop.ru/auth">https://www.iprbookshop.ru/auth</a></li> <li>7. information and legal system " Zan " - <a href="https://zan.kz/ru">https://zan.kz/ru</a></li> <li>8. Cochrane Library - <a href="https://www.cochranelibrary.com/">https://www.cochranelibrary.com/</a></li> </ol>
Electronic textbooks	<p><b>Propaedeutics and Internal Medicine:</b></p> <p>Ivashkin, V. T. Internal diseases propedeutics [Electronic Source] : textbook / V. T. Ivashkin, A. V. Okhiobystin. - Электрон. текстовые дан. ( 142Мб). - М.: ГЭОТАР - Медиа, 2017. - эл. опт. диск (CD-ROM).</p> <p>Внутренние болезни. Т. 2 [Electronic Source] : учебник / под ред. В. С. Моисеева. - 3-е изд., испр. и доп. - Электрон. текстовые дан. (45.1Мб). - М.: ГЭОТАР - Медиа, 2015. - 895 с.</p> <p>Внутренние болезни. Т. 1 [Electronic Source] : учебник / под ред. В. С. Моисеева. - 3-е изд., испр. и доп. - Электрон. текстовые дан. ( 66.5Мб). - М.: ГЭОТАР - Медиа, 2015. - 960 с.</p> <p>Ішкі аурулар./Бимурзаев Ғ.Н., Зарипова Ғ.К., 2020/<a href="https://aknurpress.kz/reader/web/2594">https://aknurpress.kz/reader/web/2594</a></p> <p>Ішкі аурулар пәнінен клиникалық тапсырмалар жинағы.</p> <p>Ержанова Ғ.А., Муханова А.К., 2016/<a href="https://aknurpress.kz/reader/web/2370">https://aknurpress.kz/reader/web/2370</a></p> <p>Шкі аурулар пропедевтикасынан жағдаяттық тапсырмалар</p> <p>Оразова Б.О., Марченко Т.В., 2016 /<a href="https://aknurpress.kz/reader/web/2348">https://aknurpress.kz/reader/web/2348</a></p> <p>Пропедевтика внутренних болезней : Учебник. / Т.С. Рябова, Е.С. Рысс, В.Я. Плоткин и др.. - СПб.: СпецЛит, 2015. - 414 с.<a href="http://rmebrk.kz/">http://rmebrk.kz/</a></p> <p>Внутренние болезни в работе врача общей практики : Учебное пособие. / К.Ж. Садыкова, Ш.У. Скандерова, С.К. Саттиева. - Туркестан: Туран, 2017. - 96 с.<a href="http://rmebrk.kz/">http://rmebrk.kz/</a></p> <p>Жаманқұлов, Қыдырқожа Абдолкәрімұлы.Ішкі аурулар [Мәтін] : оқулық / Қ. А. Жаманқұлов; Батыс Қазақстан мем. медицина акад.. - Ақтөбе : [б. ж.], 2013. - 669 б.<a href="https://elib.kaznu.kz/book/1767">https://elib.kaznu.kz/book/1767</a></p> <p>Пропедевтика внутренних болезней: Учебник. – 6-е изд., I - том перераб. и доп. (Учеб. лит. Для студентов медицинских вузов). – Алматы: Эверо, 2020. – 400 с. <a href="https://elib.kz/ru/search/read_book/676/">https://elib.kz/ru/search/read_book/676/</a></p> <p>Пропедевтика внутренних болезней: Учебник. – 6-е изд., II - том перераб. и доп. (Учеб. лит. Для студентов медицинских вузов). – Алматы: Эверо, 2020. – 212 с <a href="https://elib.kz/ru/search/read_book/682/">https://elib.kz/ru/search/read_book/682/</a></p> <p>Пропедевтика внутренних болезней: Учебник. – 6-е изд., III - том перераб. и доп. (Учеб. лит. Для студентов медицинских вузов). – Алматы: Эверо, 2020. – 208 с. <a href="https://elib.kz/ru/search/read_book/684/">https://elib.kz/ru/search/read_book/684/</a></p> <p>Нұрсұлтанова С.Д., Бакирова Р.Е., Мамашалиева С.Б., Беков Е.К., Мадиева Л.С.Жүрек тамыр жүйесінің аурулары бар науқастарды тексеру әдісі және техникасы. Оқу-әдістемелік құрал.- Алматы, «Эверо» баспасы. -2020. <a href="https://elib.kz/ru/search/read_book/705/">https://elib.kz/ru/search/read_book/705/</a></p> <p>Ахметов Қайырғали Жәлелұлы. Ішкі аурулар пропедевтикасы пәнінің клиникалық дәрістері. Алматы: «Эверо», 2020. – 262 бет <a href="https://elib.kz/ru/search/read_book/22/">https://elib.kz/ru/search/read_book/22/</a></p> <p>Ішкі ағза ауруларының пропедевтикасы. Оқулық Айтмбет Б.11- Алматы «Эверо» 2018ж,-568 бет.<a href="https://elib.kz/ru/search/read_book/3086/">https://elib.kz/ru/search/read_book/3086/</a></p>

<p style="text-align: center;">Department of Biology and Biochemistry Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology Department of Propaedeutics and Internal Medicine Department of Pediatrics-1</p>	<p style="text-align: right;">11-2024 Page 29 of 36</p>
<p style="text-align: center;">Working studying program of the discipline "Urogenital system in pathology" (Syllabus) Educational program 6B 10115 "Medicine"</p>	

	<p><b>PChD</b> Karen J. marcdante. Robert M. Kligeman. Nelson “Essential of Pediatrics” 7th edition 2015. el disc (CD-ROM). <a href="http://www.studmedlib.ru">http://www.studmedlib.ru</a>, Login: ibragim123, password: Libukma123</p> <p><b>Pathological Physiology:</b></p> <ol style="list-style-type: none"> <li>1. Патологиялық физиология. Тәжірибелік сабақтарға нұсқау [Electronic Source] : оқу құралы = Патофизиология. Руководство к практическим занятиям : учебное пособие / қаз. тіліне ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - Электрон. текстовые дан. (63,4Мб). - М. : ГЭОТАР - Медиа, 2014. - 768 бет. эл. опт. диск (CD-ROM)</li> <li>2. Адам физиологиясы. Динамикалық сызбалар атласы [Electronic Source] : оқулық / К. В. Судаков [ж.б.] ; қазақ тіл. ауд. М. Қ. Қанқожа. - Электрон. текстовые дан. (105Мб). - М. : ГЭОТАР - Медиа, 2017. - 464б.</li> <li>3. Патологиялық физиология. Досжанова М.П. , – Алматы: Эверо, 2015 ЦБ Aknurpress / <a href="https://www.aknurpress.kz/reader/web/2476">https://www.aknurpress.kz/reader/web/2476</a></li> <li>4. Кравцов В.И и др. Тестовые задания по патологической физиологии с элементами профилизации / Под ред. профессора В.И. Кравцов.- .Алматы: Эверо,2020. - 116 с. <a href="https://www.elib.kz/ru/search/read_book/472/">https://www.elib.kz/ru/search/read_book/472/</a></li> <li>5. Кравцов В.И и др. Тестовые задания по патологической физиологии с элементами профилизации / Под ред. профессора В.И. Кравцов.- .Алматы: Эверо,2020. - 128 с.<a href="https://www.elib.kz/ru/search/read_book/471/">https://www.elib.kz/ru/search/read_book/471/</a></li> <li>6. Кравцов В.И и др. Тестовые задания по патологической физиологии с элементами профилизации / Под ред. профессора В.И. Кравцов.- .Алматы: Эверо,2020. - 104 с. <a href="https://www.elib.kz/ru/search/read_book/473/">https://www.elib.kz/ru/search/read_book/473/</a></li> <li>7. Патологиялық физиология: 2 том. Оқулық/қазақ тіліне аударған, жауапты редактор Ж.Б. Ахметов. , – Алматы: Эверо, 2020 - 200 <a href="https://www.elib.kz/ru/search/read_book/91/">https://www.elib.kz/ru/search/read_book/91/</a></li> <li>8. Патологиялық физиология: 1 том. Оқулық/қазақ тіліне аударған, жауапты редактор Ж.Б.Ахметов., – Алматы: Эверо, 2020 - 240 с <a href="https://www.elib.kz/ru/search/read_book/88/">https://www.elib.kz/ru/search/read_book/88/</a></li> <li>9. Патологическая физиология:Учебник для медицинских вузов.2 том. Алматы:Эверо, 2020 – 216 <a href="https://www.elib.kz/ru/search/read_book/98/">https://www.elib.kz/ru/search/read_book/98/</a></li> <li>10. Адо А.Д, Адо М.Л, Пыцкого В.И.,Порядина Г. В., Владимирова Ю.Л.Патологическая физиология: учебник для медицинских вузов.1 том. Алматы:Эверо, 2020 - 248 с.<a href="https://www.elib.kz/ru/search/read_book/96/">https://www.elib.kz/ru/search/read_book/96/</a></li> <li>11. Адо А.Д, Адо М.Л, Пыцкого В.И.,Порядина Г. В., Владимирова Ю.Л. Патологическая физиология: Учебник для медицинских вузов.3 том. Алматы:Эверо, 2020 <a href="https://www.elib.kz/ru/search/read_book/100/">https://www.elib.kz/ru/search/read_book/100/</a></li> <li>12. Уразалин. Тест тапсырмалары, Профилизация элементтерімен бірге патологиялық физиология, Бойынша мамандықтар: 051301-жалпы медицина, 051302-стоматология. III-бөлім. Гемостаз қан жүйесінің, қанайналым және тыныс алу жүйелерінің патофизиологиясы. Алматы, «Эверо» баспасы, 2020 ж., 142 б.<a href="https://www.elib.kz/ru/search/read_book/896/">https://www.elib.kz/ru/search/read_book/896/</a></li> <li>13. Уразалин.Тест тапсырмалары. Профилизация элементтерімен бірге патологиялық физиология, Бойынша мамандықтар: 051301-жалпы медицина, 051302-стоматология.II-бөлім. Типтік патологиялық процестер, Біртектес дерттік үрдістер. Алматы,«Эверо» баспасы, 2020 ж., 184 б. <a href="https://www.elib.kz/ru/search/read_book/895/">https://www.elib.kz/ru/search/read_book/895/</a></li> <li>14. Уразалин.Тест тапсырмалары, Профилизация элементтерімен бірге патологиялық физиология, Бойынша мамандықтар: 051301-жалпы медицина, 051302-стоматология.IV-бөлім. Асқорыту, бауыр, бүйрек, эндокриндік және жүйке жүйелерінің патофизиологиясы. Алматы, «Эверо» баспасы, 2020 ж., 204 б. <a href="https://www.elib.kz/ru/search/read_book/897/">https://www.elib.kz/ru/search/read_book/897/</a></li> <li>15. Адо А.Д, Адо М.Л, Пыцкого В.И. , Порядина Г.В. , Владимирова Ю.Л. Патологиялық физиология: 3 том. Оқулық/қазақ тіліне аударған, жауапты редактор Ж.Б. Ахметов. – Алматы: Эверо, 2020 – 344 <a href="https://www.elib.kz/ru/search/read_book/94/">https://www.elib.kz/ru/search/read_book/94/</a></li> <li>16. Қалыпты және патологиялық жағдайындағы балалар мен жасөспірімдер гинекологиясы. Раисова А.Т., Байқошқарова С.Б. , – Алматы: Эверо, 2020ЦБ Aknurpress / <a href="https://www.aknurpress.kz/reader/web/2583">https://www.aknurpress.kz/reader/web/2583</a></li> <li>17. 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Department of Biology and Biochemistry Department of Pathology and Forensic Medicine Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology Department of Propaedeutics and Internal Medicine Department of Pediatrics-1		11-2024 Page 30 of 36
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Оқулық.- Алматы: Эверо, 2020. – 92 бет Эпиграф</p> <p>7. <a href="https://www.elib.kz/ru/search/read_book/861/">https://www.elib.kz/ru/search/read_book/861/</a> Несеп-жыныс ағзаларының анатомиясы.Ахмад Н.С. ,– Алматы: Эверо, 2020 ЦБ Aknurpress /</p> <p>8. <a href="https://www.aknurpress.kz/reader/web/2357">https://www.aknurpress.kz/reader/web/2357</a> Патологиялық анатомия Ахметов Ж.Б. , 2021. <a href="https://aknurpress.kz/reader/web/2423">https://aknurpress.kz/reader/web/2423</a> Жұмабеков, Х.С., Дербышев, К.Ю. Жануарлардың патологиялық анатомиясы <a href="http://rmebrk.kz/book/15133">http://rmebrk.kz/book/15133</a> Ахметов Ж. Б. Патологиялық анатомия – Оқулық. 1 том. Алматы: Эверо, 2020ж. - 360 бет. <a href="https://elib.kz/ru/search/read_book/144/">https://elib.kz/ru/search/read_book/144/</a> Ахметов Ж. Б. Патологиялық анатомия – Оқулық. 2 том. 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<p>4. Биологическая химия с упражнениями и задачами : учебник / под ред. С. Е. Северина. - М. : ГЭОТАР - Медиа, 2011. - 624 с. +эл. опт. диск (CD-ROM)</p> <p><b>Supplementary:</b></p> <p>1. Биохимия, под ред. Чл.-корр. РАН, проф. Е.С. Северина.- М., 2011</p> <p>2. Тапбергенов С.О. «Медицинская и клиническая биохимия».- Эверо, 2017.Итом;</p> <p>3. Тапбергенов С.О. «Медицинская и клиническая биохимия».- Эверо</p> <p><b>Pathological Physiology:</b></p> <p><b>Main:</b></p> <p>1. Патофизиология. 2 томдық. 1 т.: оқулық / қазақтіл. ауд. Б. А. Жетпісбаев ; ред. В. В. Новицкий. - М. : ГЭОТАР - Медиа, 2017. - 640 бет.</p> <p>2. Патофизиология. Екі томдық. 2 т. :оқулық / қазақтіл. ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - М. : ГЭОТАР - Медиа, 2018. - 464 б. +эл. опт.диск (CD-ROM).</p> <p>3. Нұрмұхамбетұлы, Ә. Клиникалық патофизиология. I - том: оқулық Патофизиология-II және оның клиникалық медицинадағы мәселелеріне нұсқама. - 2-ші бас. - Алматы :Эверо, 2016. - 180б. с.</p> <p>4. Нұрмұхамбетұлы, Ә. Клиникалық патофизиология. 2 -т. Патофизиология - 2 және оның клиникалық медицинадағы маңызды мәселелеріне нұсқама :оқулық. - 2-ші бас. - Алматы :Эверо, 2016. - 252 бет.</p> <p>5. Нұрмұхамбетұлы, Ә. Клиникалық патофизиология. 3 т. Патофизиология - II және оның клиникалық медицинадағы маңызды мәселелеріне нұсқама: оқулық. - 2-ші бас. - Алматы :Эверо, 2016. - 248 бет.</p> <p>6. Нұрмұхамбетұлы, Ә. Патофизиология. 1 том :оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 3-бас. - Алматы :Эверо, 2015. - 182 бет</p> <p>7. Нұрмұхамбетұлы, Ә. Патофизиология. 2 том: оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 4-бас. - Алматы :Эверо, 2015. - 214 бет</p> <p>8. Нұрмұхамбетұлы, Ә. Патофизиология. 3 том: оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 4- бас. - Алматы :Эверо, 2015. - 216 бет</p> <p>9. Нұрмұхамбетұлы, Ә. Патофизиология. 4 том: оқулық / Ә. Нұрмұхамбетұлы. - өнд., толықт. 4-бас. - Алматы :Эверо, 2015. - 154 бет</p> <p>10. Патофизиология : оқулық. 2 томдық. 1 том / қазақ тіл. ауд. Б. А. Жетпісбаев ; ред. В. В. Новицкий. - 4-бас.өнд.толық. - М. : ГЭОТАР - Медиа, 2017. - 640</p> <p>11. Патофизиология : оқулық. 2 томдық. 2 том / қазақ тіл. ауд. С. Б. Жәутікова ; ред. В. В. Новицкий. - 4-бас.өнд.толық. - М. : ГЭОТАР - Медиа, 2018. - 464 б. +эл. опт. диск (CD-ROM).</p> <p>12. Патологическая физиология. Т. 1 : учеб. для мед. вузов / ред. А. Д. Адо [и др.]. - Алматы : Эверо, 2014. - 244 с.</p> <p>13. Патологическая физиология. Т. 2 : учебник для мед. вузов / А. Д. Адо [и др.]. - Алматы : Эверо, 2015. - 216 с.</p> <p>14. Ефремов, А. В. Патофизиология. Основные понятия : учебное пособие / А. В. Ефремов, Е. Н. Самсонова, Ю. В. Начаров . - М. : ГЭОТАР - Медиа, 2010. - 256 с.</p> <p>15. Фролов, В. А. Общая патологическая физиология : учебник / Рек. учебно-метод. объедин. по мед. и фарм. образ. вузов России. - М. : Издательский дом "Высшее образование и Науки", 2013. - 568 с. : ил.</p> <p>16. Патологическая физиология (Общая и Частная) : учебник / В.А. Фролов [и др.]. - 4-е изд.,пер.и доп. - М. : Издательский дом "Высшее образование и наука", 2019. - 730 с.</p> <p>17. Ахметова , Н. Ш. Анатомия, физиология, патология органов слуха, речи, зрения [Текст] : учебное пособие. - 3-е изд. - Караганда : АҚНҰР, 2019. - 192 с</p> <p>18. Патофизиология. В 2 т. Т. 2 [Текст] : учебник / под ред. В. В. Новицкого, Е. Д. Гольдберга, О. И. Уразовой ; М-во образования и науки РФ. - 4-е изд., перераб. и доп ; Рек. ГОУ ВПО "ММА им. И. М. Сеченова". - М. : ГЭОТАР - Медиа, 2012. - 640 с. + эл. опт. диск (CD-ROM)</p> <p>19. Патофизиология. В 3 т. Т. 3 [Текст] : учебник / А. И. Воложин [и др.] ; под ред. А. И. Воложина, Г. В. Порядина. - Рек. УМО объедин. по мед. и фарм. образованию вузов России в качестве учебника. - М. : Академия, 2006. - 304 с. - (Высшее проф. образование).</p> <p>20. Jain, A. K. Textbook of physiology : textbook. Vol. 1 / A. K. Jain . - 6 th ed. - Nev Delhi : Avichal publishing company, 2015. - 590 p.Перевод заглавия: Учебник физиологии</p> <p>21. Jain, A. K. Textbook of physiology : textbook. Vol. 2 / A. K. Jain . - 6nd ed. - Nev Delhi : Avichal publishing company, 2015. - 1121 p. Перевод заглавия: Учебник физиологии</p> <p>22. Norris, Tommie L. Porth's Pathophysiology: Concepts of Altered Health States [Text] : textbook / Tommie L. Norris. - 10 nd ed. - [S. l.] : Wolters Kluwer, 2019. - 1573 p. - ISBN 978-1-4963-7759-3 : 48115 Tr.</p> <p>Перевод заглавия: Патофизиология Porth's: концепции измененных состояний здоровья</p>	
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<b>12.</b>	<b>Discipline Policy</b>
<b>Requirements for students (attendance, behavior, grading policy, penalties, incentives, etc.)</b> <ul style="list-style-type: none"> <li>● observe medical ethics and deontology;</li> <li>● no smoking in the academy;</li> <li>● maintain cleanliness in the department;</li> <li>● do not damage furniture in classrooms;</li> <li>● treat textbooks with care;</li> <li>● maintain the appearance of a medical university student;</li> <li>● observe safety regulations;</li> <li>● during quarantine, wear medical masks and comply with sanitary and epidemiological regulations;</li> <li>● do not miss classes without a valid reason;</li> <li>● classes missed for a valid reason must be made up in a timely manner, but only with permission from the dean's office and at a time determined by the teacher;</li> <li>● don't be late for classes;</li> <li>● have the necessary documentation in class: syllabus, methodological instructions for classes, lectures, notebook and textbook;</li> <li>● prepare for classes conscientiously;</li> <li>● be active during classes;</li> <li>● do not engage in other activities during classes: do not talk, do not smoke, do not chew gum, do not eat food, do not use the phone, do not listen to music, do not read newspapers and magazines, do not prepare for classes in another subject;</li> <li>● maintain silence and order during breaks;</li> </ul>	

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- implement SIW in a timely manner.

**Penalties for failure to complete sections of the work:**

- If you miss lectures without a valid reason, your grade for the midterm assessment will be reduced – 1 point for each missed lecture;
- If you miss a SIW without a valid reason, your midterm assessment score will be reduced by 2 points for each missed lesson;
- In case of a single violation of the discipline policy, the student is given a warning;
- In case of systematic violation of the discipline policy, information about the student's behavior is delivered to the faculty dean's office.

**Criteria for non-admission to final control:**

A student who has received an unsatisfactory grade for one of the types of controls (ME 1, ME 2, average grade of the current rating) is not admitted to the final control for the discipline.

<b>13. Academic policy based on the moral and ethical values of the academy</b>			
Regulations and Rules of SKMA. Academic policy.			
P.4. Code of honor of the student			
P.10. Organization of the educational process			
P.12. Grading Policy			
The final grade is calculated automatically based on the average grade of the current control, the average grade of the midterm control and the grade of the final control.			
<b>Final score (100%) = RD (60%) + FC (40%)</b>			
<b>RA (60%) = ME avg (20%) + CC avg (40%)</b>			
<b>ME avg = (ME1 + ME2)/ 2</b>			
<b>Final score (100%) = ME avg x 0.2 + CC avg x 0.4 + FC x 0.4</b>			
<b>RA</b> – rating of admission			
<b>FC</b> – assessment of final control			
<b>ME avg</b> – average score of midterm control, taking into account penalty points			
<b>CC av</b> – average assessment of current control taking into account SIW			
<b>ME 1</b> – midterm examination 1			
<b>ME 2</b> – midterm examination 2			
<b>14. Approval and revision</b>			
Date of agreement with the library and information center	Protocol No. _	Head of the BIC Darbicheva R.I.	Signature
Date of approval for Academic Committee of the Working Program	Protocol No. ____	Full name of the Chairman of the AK OP	Signature
Date of approval at the department	Protocol No. ____	Full name of the head	Signature
Date of revision at the department	Protocol No. ____	Full name of the head	Signature
Date of revision on Academic Committee of the Working Program	Protocol No. ____	Full name of the Chairman of the AK OP	Signature

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