



ОРИГИНАЛ

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| ONTÜSTIK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ | | SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» | |
| Department of Therapy and Cardiology Syllabus "Fundamentals of Internal Medicine - 1" | | 044-51/11 1 page of 16 | |

Department of Therapy and Cardiology
 Work program of the discipline (Syllabus)
 Educational program: 6B10101 "General Medicine"

SYLLABUS


| 1. General information about the discipline | | | |
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| 1.1 | Discipline Code: OVB 4301-1 | 1.6 | Academic year: 2022-2023 |
| 1.2 | Name of discipline: Fundamentals of Internal Medicine -1 | 1.7 | Course: 4 |
| 1.3 | Prerequisites: propaedeutics of internal diseases, pathology, pathophysiology, clinical pharmacology | 1.8 | Semester: 7 |
| 1.4 | Postrequisites: Fundamentals of Internal Medicine - 2 | 1.9 | Number of credits (ECTS): 5 |
| 1.5 | Cycle: DB (basic discipline) | 1.10 | Component: HF (optional component) |

| 2. Description of the discipline (maximum 150 words) | |
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| The subject "Internal Medicine" is a field of clinical medicine that studies etiopathogenesis, symptoms, syndromes, diagnostic methods, provision of medical care in emergency conditions, pharmacodynamics of medicinal drugs, prognosis and prevention of common diseases of internal organs based on scientific principles within the framework of the legislation of the Republic of Kazakhstan. The program has integration with the following subjects: anatomy, physiology, pathological anatomy, pathological physiology, pharmacology. | |

| 3. Summative assessment form * | | | |
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| 3.1 | Testing | 3.5 | Solution of situational problems |
| 3.2 | Writing✓ | 3.6 | Writing a case history |
| 3.3 | Oral | 3.7 | Other (specify) |
| 3.4 | OSPE/OSKE or practical skills intake✓ | | |

| 4. Aims of the discipline | |
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| To form the student's skills of clinical thinking, based on knowledge of the pathophysiological mechanisms of the course and outcome of diseases, physical and clinical - laboratory methods of examination and choice of drugs in adult patients with the main clinical syndromes of internal diseases. | |

| 5. Learning outcomes (RO disciplines) | |
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| PO1 | Provides patient-centered care in the biomedical, clinical, epidemiological and social-behavioral sciences for the most common diseases. |
| PO2 | Carries out its activities within the framework of the legislation of the Republic of Kazakhstan in the field of healthcare, is guided by them in its practical activities to ensure optimal medical care. |
| PO3 | Complies with the rules of ethics, deontology and subordination, demonstrates interpersonal and communication skills, leading to effective exchange of information and cooperation with patients, their families and medical professionals. |
| PO4 | Carries out effective measures aimed at diagnosing, treating, and preventing common and early forms of diseases. |
| RO5 | Performs professional duties, organizes self-control and continuous improvement of its activities. |
| RO6 | Supports continuous personal and professional growth, constantly improves the quality of medical care based on self-assessment and lifelong learning. |
| RO7 | Applies scientific principles, methods and knowledge to medical practice and research. Able to continuous self-education and development. Introduces new methods into clinical practice. |

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| ОҢТҮСТІК-ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ |  SKMA -1979- | SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» |
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| RO 8 | Complies with the standards for the implementation of public health protection, the sanitary and hygienic regime of the healthcare organization and the epidemiological safety of the environment, labor safety standards in the healthcare organization | |
| RO 9 | Carries out diagnostics, provides qualified and emergency medical care for urgent and life-threatening conditions | |
| RO 10 | Works in the electronic databases of the healthcare system of the Republic of Kazakhstan, provides documentation of the processes of providing medical services | |
| RO 11 | Organizes medical and social assistance, conducts preventive and recreational activities among the population. | |
| 5.1 | RO disciplines | The learning outcomes of the EP with which the RO disciplines are associated |
| | PO1 | Provides patient-centered care in the biomedical, clinical, epidemiological and social-behavioral sciences for the most common diseases. |
| | PO2 | Carries out its activities within the framework of the legislation of the Republic of Kazakhstan in the field of healthcare, is guided by them in its practical activities to ensure optimal medical care. |
| | RO 4 | Carries out effective measures aimed at diagnosing, treating, and preventing common and early forms of diseases. |
| | RO 7 | Applies scientific principles, methods and knowledge to medical practice and research. Able to continuous self-education and development. Introduces new methods into clinical practice. |
| | RO 9 | Carries out diagnostics, provides qualified and emergency medical care for urgent and life-threatening conditions |
| | RO 11 | Organizes medical and social assistance, conducts preventive and recreational activities among the population. |

| 6. Detailed information about the discipline | | | | | | |
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| 6.1 | Venue (building, auditorium): Shymkent, SKMA sq. AL-FARABI 1, tel.: 40-82-26, 40-82-22 (1800), www.ukma.kz , www.ukma.kz/ru , therapy_med@mail.ru Clinical bases: – Regional Clinic Hospital – City hospital №2 – Clinic "Esculapius" – Clinic "Er Ana" – Clinic "CardioMed" | | | | | |
| 6.2 | Number of hours | Lectures | Prakt. zan. | Lab. zan. | SRSP | SRS |
| | Fundamentals of Internal Medicine-1 | 15 | 35 | - | thirty | 70 |

| 7. Information about teachers | | | | | |
|-------------------------------|----------------------------|--|--|--|--|
| No | Full name | Degrees and position | Email address | Scientific interests, etc. | Achievements |
| 1. | Asanova Galia Kutymbetovna | Candidate of Medical Sciences, Associate | agk_26@mail.ru | Scientific interests: "The state of the cardiovascular system in workers in the cotton processing industry"; | Author over 70 scientific articles, 2 teaching aids. |

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| | | Professor, Head of Department | | "Interventional treatment of myocardial infarction"; "Echocardiographic method for assessing the state of the heart in patients undergoing CABG with concomitant CKD" | |
| 2. | Turtaeva Aigul Elubaevna | acting professor, candidate of medical sciences | Curtcha@mail.ru | The method of rehabilitation of cancer patients, method of obtaining ointment "Artrogus" for the treatment of articular syndrome | The highest qualification category in the specialties: "adult rheumatology", "therapy", "adult cardiology". Candidate of Medical Sciences, Associate Professor. |
| 3. | Abseitova Saule Raimbekovna | Professor, Chairman of the Board of the Republican Public Organization "Kazakhstan Cardiology Society" | saule_1947@mail.ru | Member of the Presidium of the Association of Cardiologists of the Republic of Kazakhstan. Winner of the highest award of the Republican Public Association "National Medical Association" - the badge "Altyn Dariger". | Author of more than 200 published works, including four educational, three methodological manuals, seven methodological recommendations, three copyright patents, one monograph |
| 4. | Kushekbaeva Asiya Ergeshovna | assistant professor | dr_asia@mail.ru | Associate Professor of the Department of Therapeutic Disciplines, Candidate of Medical Sciences. | Author of more than 120 scientific papers, manuals, articles. |
| 5. | Bekzhigitov Spandiyar Baizhigitovich | Professor | bekzhigitov63@mail.ru | Doctor of Medical Sciences, health care manager, cardiologist of the highest category. Winner of the highest award of the Republican Public Association "National Medical Association" - the badge "Altyn Dariger" | Author of more than 150 scientific papers, including invention patents, guidelines for practitioners and methodological recommendations. |
| 6. | Baymirzaeva Kamila Sabitovna | Assistant | kam_b89@mail.ru | Scientific interests: "Cause of mortality from CKD" | GP Specialist Certificate |

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| 7. | Tastanbek Nurila Dosbolkyzy | Assistant | tnd@mail.ru | - | Therapist Specialist Certificate |
| 8. | Alieva Shyryn Baitemirovna | Assistant | aliyeva1818@mail.ru | Scientific interests: "Characteristics of outpatients with liver diseases (chronic viral hepatitis, hepatic steatosis, liver diseases caused by diabetes mellitus and obesity) receiving Essentiale® forte N as an addition to standard therapy in real practice" | Doctor-Gastroenterologist of the highest category, hepatologist |
| 9. | Arsykulova Asel Talaibekkyzy | Assistant | medina.kaldan@bk.ru | - | GP Specialist Certificate |

| 8. Thematic plan in the discipline "Fundamentals of Internal Diseases-1" (VII) semester | | | | | | |
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| days | Topic name | Summary | RO disciplines | Number of hours | Forms/ methods/ learning technologies | Forms/ evaluation methods |
| 1 | Lecture Bronchitis acute and chronic | Bronchitis is acute and chronic. Definition, etiology. Pathophysiological mechanisms of bronchitis development. Classification. Clinic, diagnostics. Pharmacodynamics of bronchodilators, anti-inflammatory, antiviral, antibacterial, mucolytic drugs. Dispensary supervision. | RO 1,2,4,7, 9,11 | 1 | overview lecture | Feedback (question answer) |
| | Practical lesson Bronchitis acute and chronic | Broncho-obstructive syndrome, respiratory failure syndrome. clinical picture. Pathophysiological mechanisms of development broncho-obstructive syndrome, respiratory failure syndrome. Diagnosis, tactics of patient management. Pharmacodynamics of bronchodilators, anti-inflammatory, antiviral, antibacterial, mucolytic drugs. | RO 1,2,4,7, 9,11 | 3 | Work in small groups. Execution of test tasks | Oral survey. Examination fulfillment test tasks |
| | SRSP. Theme and task of SRO Fibrosing alveolitis | fibrosing alveolitis. Etiology. Pathophysiological mechanisms of development of fibrosing alveolitis. Classification. Clinical manifestations. differential | RO 1,2,4,7, 9,11 | 2/6 | Topic discussion. Working on a project: | Checking the solution of situational problems |

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| | | diagnosis. Principles of treatment. Pharmacodynamics of anti-inflammatory drugs, corticosteroids, cytostatics. | | | drawing up a work plan | |
| 2 | Lecture Pneumonia. | Pneumonia. Definition, etiology. Pathophysiological mechanisms of pneumonia development. Classification. Clinic, diagnostics. Treatment. Pharmacodynamics of anti-inflammatory, antiviral, antibacterial drugs. Medical examination, prevention. | RO 1,2,4,7, 9,11 | 1 | overview lecture | Feedback (question- answer) |
| | Practical lesson Pneumonia | Pneumonia. Features of the clinic with different pathogens. Pathophysiological mechanisms of pneumonia development. Atypical pneumonia (caused by intracellular pathogens). Clinic, diagnostics. Pharmacodynamics of anti-inflammatory, antiviral, antibacterial drugs. Dispensary supervision. | RO 1,2,4,7, 9,11 | 3 | "Standardize d patient" Solutions of situational problems. cyber patient, Trello board | Oral survey. Checking the solution of situational problems |
| | SRSP. Theme and task of SRO Tumors of the lungs. Project: To study the risk of developing diabetes mellitus in patients with different levels of cardiovascular risk through the analysis of the latest research results from the Scopus database | Tumors of the lungs. Etiology. Pathophysiological mechanisms of development of lung tumors. Clinical diagnostic criteria. Differential diagnosis. Pharmacodynamicschemo-radiation therapy.Indications for surgical treatment. Project: To study the risk of developing diabetes mellitus in patients with different levels of cardiovascular riskthrough the analysis of the latest research results from the Scopus database | RO 1,2,4,7, 9,11 | 2/5 | Analysis of scientific articles, drawing up and solving situational problems / project work Drawing up a work plan for a scientific project | Evaluation analysis of scientific articles; solution of a situational problem; project monitoring Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 3 | Lecture COPD | COPD Definition, etiology, classification, exacerbation criteria. Pathophysiological mechanisms of COPD development. Clinic, diagnostics. Treatment. Pharmacodynamics of bronchodilators, anti-inflammatory, antiviral, antibacterial, mucolytic drugs. Clinical examination, prevention, sanatorium treatment. | RO 1,2,4,7, 9,11 | 2 | overview lecture | Feedback (question- answer) |



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| | Practical lesson Chronic obstructive pulmonary disease. (COPD) | Chronic obstructive pulmonary disease. (COPD) Definition, etiology, classification, exacerbation criteria. Pathophysiological mechanisms of COPD development. Clinic, diagnostics. Treatment. Pharmacodynamics of bronchodilators, anti-inflammatory, antiviral, antibacterial, mucolytic drugs. Clinical examination, prevention, sanatorium treatment | RO 1,2,4,7, 9,11 | 3 | Work in small groups. Solution of situational problems. | Evaluation of work in small groups. Checking the solution of situational problems |
| | SRSP. Theme and task of SRO Acute respiratory failure | Acute respiratory failure. Definition and classification. Pathophysiological mechanisms of development of acute respiratory failure. clinic, toliniko-diagnostic criteria. Pharmacodynamics of bonchidilators - 1st line; β 2-agonists: bronchodilators; glucocorticoids; anticholinergics: tiotropium bromide, iprotropium bromide; mucolytic drugs: ambroxol, N-acetylcysteine; kinesitherapy: postural drainage; oxygen therapy; diuretics. Medical examination, prevention. | RO 1,2,4,7, 9,11 | 2/5 | Analysis of scientific articles, situational tasks / project work | Grade analysis of scientific articles; solution of a situational problem; project monitoring Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 4 | Lecture Bronchial asthma. | Bronchial asthma. Etiology. Pathogenesis. Pathophysiological mechanisms of development of bronchial asthma. Classification. Clinic, diagnostics. Treatment. Pharmacodynamics of bronchodilators (b 2 adrenomimetics, ICS, systemic corticosteroids), antileukotriene drugs (ALR) (montelukast). Clinical examination, prevention, Sanatorium treatment. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson Bronchial asthma (BA). Emphysema | Bronchial asthma. Emphysema of the lungs. Etiology. Pathophysiological mechanisms of development of bronchial asthma, pulmonary emphysema. Classification. Clinic of asthma attack and interictal period. Treatment during an attack and in the non-attack period. Spa | RO 1,2,4,7, 9,11 | 3 | "Standardize d patient". Execution of test tasks, cyber patient, Trello board | Evaluation of the implementati on of practical skills. Checking the execution of test tasks |



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| | | treatment. Pathophysiological mechanisms of the development of status asthmaticus. Definition, clinic. Pharmacodynamics of bronchodilators (b 2 adrenomimetics, ICS, systemic corticosteroids). | | | | |
| | SRSP. Theme and task of SRO Sarcoidosis of the lungs | Sarcoidosis of the lungs. Etiology. Pathophysiological mechanisms of development of sarcoidosis. Classification. Clinical manifestations. differential diagnosis. Pharmacodynamics of corticosteroids, cytostatics, tumor necrosis factor inhibitors (Thalidomide and Pentoxifylline) and monoclonal antibodies (Etanercept, Infliximab). | RO 1,2,4,7, 9,11 | 2/5 | Analysis of scientific articles, situational tasks / project work | Grade analysis of scientific articles; solution of a situational problem; project monitoring Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 5 | Lecture Pleurisy. | Pleurisy. Types of pleurisy, etiology, pathophysiological mechanisms of pleurisy development. Characteristics of exudate, clinic, radiological diagnostics. Pharmacodynamics of anti-inflammatory, antiviral, antibacterial drugs. Outcomes, prevention. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson bronchiectasis. Abscess and gangrene of the lungs | bronchiectasis. Abscess and gangrene of the lungs. Modern ideas about etiology. Pathophysiological mechanisms development of bronchiectasis, abscess and gangrene of the lungs. clinical picture. Major clinical syndromes. Clinical forms and variants of the course. Outcomes. Pharmacodynamics of anti-inflammatory, antibacterial drugs. Treatment. Prevention. Clinical examination of patients | RO 1,2,4,7, 9,11 | 2 | Analysis wedge. cases. Work with the clinical protocol of the Ministry of Health of the Republic of Kazakhstan | Evaluation of the work of students in a group and work with a clinical protocol |
| | SRSP. Theme and task of | Pulmonary heart. TO classification of pulmonary hypertension. Chronic cor pulmonale: | RO 1,2,4,7, 9,11 | 2/5 | Analysis of scientific articles, | Evaluation analysis of scientific |



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| | SROPulmonary heart | classification. Pathophysiological mechanismsdevelopmentcor pulmonale, pulmonary hypertension. TOclassification of pulmonary hypertension. Clinic. Compensated and decompensated cor pulmonale.Clinical diagnostic criteria. Differential diagnosis.Pharmacodynamics of endothelin receptor antagonists (ERs): ambrisentan, bosentan; calcium channel blockers (CCBs): amlodipine, diltiazem, nifedipine; phosphodiesterase subtype 5 inhibitors (IFDE-5): sildenafil, tadalafil; prostanoids: iloprost, soluble guanylate cyclase stimulators (SGCC): riociguat; diuretics; cardiac glycosides, indirect oral anticoagulants. | | | compilation and solution of situational problems / project work | articles; solution of a situational problem; Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 6 | Lecture Glomerulonephritis, acute and chronic | Glomerulonephritis acute and chronic. Definition, etiology. Pathophysiological mechanisms of development of acute,chronic glomerulonephritis. Classification. Diagnostics. Pharmacodynamics of immunosuppressive drugs: prednisolone, methylprednisolone, cyclophosphamide; calcineurin inhibitors: cyclosporine, tacrolimus; antihypertensive, nephroprotective drugs: angiotensin-converting enzyme inhibitors: fosinopril, enalapril, ramipril; calcium channel blockers: amlodipine, nifedipine; beta-adrenergic blockers: carvedilol; angiotensin II receptor antagonists: losartan, irbesartan; statins; diuretics: loop-furosemide, hypothiazide, with inefficiency - ultrafiltration; with severe azotemia and hyperkalemia - hemodialysis. Dispensary supervision. Sanatorium treatment, prevention. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lessonAcute and chronic glomerulonephritis | Acute and chronic glomerulonephritis. Modern ideas about the etiology andPathophysiological mechanismsdevelopmentacute, chronic glomerulonephritis. Classification. Diagnostics. Pharmacodynamics of | RO 1,2,4,7, 9,11 | 3 | Work in small groups. Solution of situational problems | Evaluation of work in small groups. Checking the solution of situational problems |



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| | | immunosuppressive drugs: prednisolone, methylprednisolone, cyclophosphamide; calcineurin inhibitors: cyclosporine, tacrolimus; antihypertensive, nephroprotective drugs: angiotensin-converting enzyme inhibitors: fosinopril, enalapril, ramipril; calcium channel blockers: amlodipine, nifedipine; beta-adrenergic blockers: carvedilol; angiotensin II receptor antagonists: losartan, irbesartan; statins; diuretics: loop-furosemide, hypothiazide, with inefficiency - ultrafiltration; with severe azotemia and hyperkalemia - hemodialysis. Dispensary supervision. Sanatorium treatment, prevention. | | | | |
| | SRSP. Theme and task of SRO Types of nephropathy. | Definition. Types of nephropathy. Dysmetabolic nephropathy: diabetic nephropathy, gouty nephropathy; cardiorenal syndrome; hepatorenal syndrome; nephropathy in diffuse connective tissue diseases; drug nephropathy; nephropathy in pregnancy. Pathophysiological mechanisms of development of nephropathies. Differential diagnosis. Pharmacodynamics antihypertensive, nephroprotective drugs: angiotensin-converting enzyme inhibitors; calcium channel blockers; blockers of beta-adrenergic receptors; angiotensin II receptor antagonists; diuretics. | RO 1,2,4,7, 9,11 | 2/5 | Analysis of scientific articles, compilation and solution of situational problems / project work | Evaluation analysis of scientific articles; solution of a situational problem; Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 7 | Lecture Acute renal failure | Acute renal failure, concept, classification, Pathophysiological mechanisms of development of acute renal failure. Clinical diagnostic criteria. Medical treatment of AKI according to etiology. Treatment of complications: renal function replacement therapy (RRT), hemodiafiltration, hemodialysis; hemosorption, plasmatorption, therapeutic plasma exchange. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |



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| | Practical lesson Acute renal failure | Acute renal failure. Definition.Modern ideas about etiology and pathogenesis. clinical picture. Major clinical syndromes. Diagnostics, tactics of patient management | RO 1,2,4,7, 9,11 | 3 | "Standardize d patient". Execution of test tasks, cyber patient, Trello board | Evaluation of the implementati on of practical skills. Checking the execution of test tasks |
| | SRSP. Theme and task of SRO. Acute and chronic tubulointerstitial nephritis. Project Pre-Check | Acute and chronic tubulointerstitial nephritis. Definition. Etiology. Pathophysiological mechanisms of development of acute and chronic tubulointerstitial nephritis. Clinical diagnostic criteria. Differential diagnosis. Pharmacodynamics of anti-inflammatory, antibacterial drugs: penicillins, cephalosporins, fluoroquinolones;nephroprotecti ve drugs: angiotensin-converting enzyme inhibitors; angiotensin II receptor antagonists. | RO 1,2,4,7, 9,11 | 2/6 | Analysis of scientific articles in the form, drafting and solving situational problems / project work | Evaluation analysis of scientific articles; solution of a situational problem; evaluation of the interim report on the implementat ion of the project Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 8 | Lecture chronic kidney disease | Chronic kidney disease, concept, pathophysiological mechanisms of development of chronic kidney disease. Classification, diagnosis, tactics of managing patients at different stages of CKD. Pharmacotherapy to slow the progression of CKD, nephro- and cardioprotective agents. The main groups of drugs used to slow the progression of CKD are nephro- and cardioprotectors. indications for hemodialysis, kidney transplantation. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson chronic kidney disease | Chronic kidney disease, concept, pathophysiological mechanisms of development of chronic kidney disease. Classification, diagnosis, | RO 1,2,4,7, 9,11 | 3 | Work in small groups. | Evaluation of work in small groups. |

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| | | tactics of managing patients at different stages of CKD. Pharmacotherapy to slow the progression of CKD, nephro- and cardioprotective agents. The main groups of drugs used to slow the progression of CKD are nephro- and cardioprotectors. indications for hemodialysis, kidney transplantation. | | | | |
| | SRSP. Theme and task of SROFrontier control No. 1 | Chronic kidney disease, concept, pathophysiological mechanisms of development of chronic kidney disease. Classification, diagnosis, tactics of managing patients at different stages of CKD. Pharmacotherapy to slow the progression of CKD, nephro- and cardioprotective agents. The main groups of drugs used to slow the progression of CKD are nephro- and cardioprotectors. indications for hemodialysis, kidney transplantation. Diet therapy for CKD. Conservative methods of nephroprotection. Renal replacement therapy in CKD. Frontier control No. 1 | RO 1,2,4,7, 9,11 | 2/6 | Analysis of scientific articles, solution of situational problems. Execution of test tasks. | Evaluation answers to control questions, test tasks and solutions to situational problems |
| 9 | Lecture Arterial hypertension. | Arterial hypertension. Definition, etiology. Pathophysiological mechanisms of development of arterial hypertension. Classification. Clinic, diagnostics. Pharmacodynamics of antihypertensive drugs, angiotensin-converting enzyme inhibitors; calcium channel blockers; blockers of beta-adrenergic receptors; angiotensin II receptor antagonists; diuretics; aldosterone antagonists; lipid-lowering drugs: statins, omega-3 polyunsaturated fatty acids, fibrates. Prevention, dispensary observation, sanatorium treatment. hypertensive crises. Pathophysiological mechanisms of development of hypertensive crisis. Classification, clinic, diagnostics. Urgent Care. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson Arterial hypertension | Arterial hypertension. Definition, etiology. Pathophysiological mechanisms of development of arterial | RO 1,2,4,7, 9,11 | 3 | Analysis wedge. cases. | Evaluation of the work of students in a group and |



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| | | hypertension. Classification. Clinic, diagnostics. Pharmacodynamics of antihypertensive drugs, angiotensin-converting enzyme inhibitors; calcium channel blockers; blockers of beta-adrenergic receptors; angiotensin II receptor antagonists; diuretics; aldosterone antagonists; lipid-lowering drugs: statins, omega-3 polyunsaturated fatty acids, fibrates. Prevention, dispensary observation, sanatorium treatment. hypertensive crises. Pathophysiological mechanisms of development of hypertensive crisis. Classification, clinic, diagnosis, emergency care, Pharmacodynamics of antihypertensive drugs, angiotensin-converting enzyme inhibitors: enalaprilat; calcium channel blockers: nifedipine; beta-adrenergic blockers: propranolol; diuretics: furosemide; magnesium sulfate; centrally acting drugs: clonidine. | | | Work with the clinical protocol of the Ministry of Health of the Republic of Kazakhstan | work with a clinical protocol |
| | SRSP. Theme and task of SRO Symptomatic arterial hypertension. | Symptomatic arterial hypertension. Definition, etiology. Pathophysiological mechanisms of development of symptomatic arterial hypertension. Classification. Clinic, diagnostics. Etiopathogenetic treatment. Pharmacodynamics of anti-inflammatory, antibacterial, nephroprotective, antihypertensive, lipid-lowering drugs. Prevention, dispensary observation, sanatorium treatment. | RO 1,2,4,7, 9,11 | 2/6 | Analysis of scientific articles, compilation and solution of situational problems / project work | Evaluation analysis of scientific articles; solution of a situational problem; Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 10 | Lecture Atherosclerosis. | Atherosclerosis. Definition, etiology, Pathophysiological mechanisms of atherosclerosis development. Pharmacodynamics of lipid-lowering drugs: HMG-CoA reductase inhibitors, cholesterol absorption inhibitors: ezetimibe; PCSK9 inhibitors; | | 2 | Overview lecture | Feedback (question-answer) |


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| | | fibrates; omega-3 polyunsaturated fatty acids. Prevention; | | | | |
| | Practical lesson Atherosclerosis | Atherosclerosis. Definition, etiology, Pathophysiological mechanisms of atherosclerosis development. Pharmacodynamics of lipid-lowering drugs: HMG-CoA reductase inhibitors, cholesterol absorption inhibitors: ezetimibe; PCSK9 inhibitors; fibrates; omega-3 polyunsaturated fatty acids. Prevention. | RO 1,2,4,7, 9,11 | 3 | "Standardize d patient", cyber patient, Trello board | Evaluation of the implementati on of practical skills |
| | SRSP. Theme and task of SRO Infectious endocarditis | Infective endocarditis. Definition. Etiology, Pathophysiological mechanisms of development of infective endocarditis. Classification. Clinic. Diagnostics. Pharmacodynamics of antibacterial drugs: b-lactams: benzylpenicillin, ampicillin; cefazolin; sulfonamides; aminoglycosides: gentamicin; Glycopeptides: vancomycin. Prevention. | RO 1,2,4,7, 9,11 | 3/6 | Analysis of scientific articles, compilation and solution of situational problems / project work | Evaluation analysis of scientific articles; solution of a situational problem; Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| eleven | Lecture Cardiac ischemia | Cardiac ischemia. Definition. Etiology, Pathophysiological mechanisms of development of coronary heart disease. Classification. Clinic. Diagnostics. Pharmacodynamics antianginal drugs: nitrates, β -blockers, calcium antagonists, narcotic analgesics; lipid-lowering drugs; antiplatelet agents, anticoagulants, fibrinolytics. Prevention, dispensary observation. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson Ischemic heart disease (CHD). angina pectoris | ischemic heart disease. Angina. Definition. Etiology. Pathophysiological mechanisms of development of stenocardia. Risk factors. Classification. Clinic. Diagnostics. Pharmacodynamics of antianginal drugs: nitrates, β -blockers, calcium antagonists, narcotic analgesics; lipid-lowering drugs; antiplatelet agents. | RO 1,2,4,7, 9,11 | 2 | Work in small groups. Solution of situational problems | Evaluation of work in small groups. Checking the solution of situational problems |



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| | | Prevention, dispensary observation. | | | | |
| | SRSP. Theme and task of SROCardiomyopathy | Cardiomyopathy.Definition. Etiology, Pathophysiological mechanisms of development of cardiomyopathies. Classification. Clinic. Diagnostics. Pharmacodynamics of β -blockers, calcium antagonists, diuretics, aldosterone antagonists, antiplatelet agents; ionotropic drugs. Heart transplant. Prevention of sudden cardiac death. | RO 1,2,4,7, 9,11 | 3/5 | Analysis of scientific articles, compilation and solution of situational problems / project work | Evaluation analysis of scientific articles; solution of a situational problem; Criteria assessment; project monitoring Checklist for evaluating a scientific article and a project. |
| 12 | Lecture myocardial infarction | Myocardial infarction.Definition. Etiology, Pathophysiological mechanisms of myocardial infarction. Classification. Clinic. Diagnostics. Pharmacodynamics antianginal drugs: nitrates, β -blockers, calcium antagonists, narcotic analgesics; lipid-lowering drugs; antiplatelet agents, anticoagulants, fibrinolytics. Prevention, dispensary observation. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson Ischemic heart disease (CHD). myocardial infarction | Myocardial infarction.Definition. Etiology, Pathophysiological mechanisms of myocardial infarction. Classification. Clinic. Diagnostics. Pharmacodynamics antianginal drugs: nitrates, β -blockers, calcium antagonists, narcotic analgesics; lipid-lowering drugs; antiplatelet agents, anticoagulants, fibrinolytics. Prevention, dispensary observation. Sudden coronary death. Definition, clinic. Emergency therapy at the stage of clinical death. Acute left ventricular heart failure. Etiology, pathogenesis, clinic, diagnostics, treatment. | RO 1,2,4,7, 9,11 | 2 | "Standardize d patient", cyber patient, Trello board | Evaluation of the implementation of practical skills |
| | SRSP. Sudden coronary death | Sudden coronary death. Definition, clinic. Cardiopulmonary resuscitation. Emergency therapy at the stage of clinical death. | | 3/5 | Protection of the project. | Evaluation project protection Evaluation Checklist |

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|----|---|---|------------------------|-----|--|---|
| | Project Protection | | | | | project. |
| 13 | Lecture Chronic heart failure | Chronic heart failure. Definition. Etiology, Pathophysiological mechanisms of development of chronic heart failure. Classification. Clinic. Diagnostics. Pharmacodynamics cardioprotectors: SGLT-2 inhibitors, angiotensin-neprilysin receptor inhibitors (ARNIs), β -blockers, calcium antagonists; lipid-lowering drugs; antiplatelet agents, anticoagulants, diuretics, aldosterone antagonists, Prevention, follow-up. | RO 1,2,4,7, 9,11 | 1 | Overview lecture | Feedback (question-answer) |
| | Practical lesson Chronic heart failure | Chronic heart failure. Definition. Etiology, Pathophysiological mechanisms of development of chronic heart failure. Classification. Clinic. Diagnostics. Pharmacodynamics cardioprotectors: sodium-glucose cotransporter type 2 inhibitors; inhibitor of If-channels; angiotensin-neprilysin receptor inhibitors (ARNIs); β -blockers; aldosterone antagonists; calcium antagonists; lipid-lowering drugs; antiplatelet agents; anticoagulants; diuretics. Prevention, dispensary observation. | RO 1,2,4,7, 9,11 | 2 | Work in small groups. Solution of situational problems | Evaluation of work in small groups. Checking the solution of situational problems |
| | SRSP. Pulmonary embolism Frontier control No. 2 | Definition. Etiology. Pathophysiological mechanisms of development of pulmonary embolism. Pharmacodynamics of oral anticoagulants, vitamin K antagonists, low molecular weight heparins. | RO 1,2,4,7, 9,11 | 3/5 | Solution of situational problems. Execution of test tasks. | Evaluation answers to control questions, test tasks and solutions to situational problems |

| | | |
|-----------|---|---|
| 9. | Teaching methods and forms of controls | |
| 9.1 | Lectures | Overview lectures |
| 9.2 | Practical lessons | Discussion of the topic of the lesson. Work in small groups. Execution of test tasks. "Standardized patient" Solution of situational problems. Analysis of clinical cases. Work with the clinical protocol of the Ministry of Health of the Republic of Kazakhstan. |

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| ОҢТҮСТІК-ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ |  SKMA -1979- | SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия» |
| Department of Therapy and Cardiology | | 044-51/11 |
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| | | |
|-----|------------------|--|
| 9.3 | SRSP/SRS | Work on the project: drawing up a work plan. Analysis of scientific articles in the form of a presentation, drafting and solving situational problems / project work. Drawing up a work plan for a scientific project. |
| 9.4 | Frontier control | Testing, oral questioning. |

| | |
|-------------|--|
| 10. | Evaluation criteria |
| 10.2 | Criteria for evaluating the learning outcomes of the discipline |

Checklist for a practical lesson (discussion of classes, solving situational problems)

| No. | step by step | Score in points | | | |
|---------------|---|-----------------|------------|------------|----------|
| | | 1 | 0.7 | 0.4 | 0 |
| 1 | Highlight the main syndromes | 1 | 0.7 | 0.4 | 0 |
| 2.1 2.2 | Decipher the results of laboratory and instrumental studies | 1 | 0.7 | 0.4 | 0 |
| 3 | Substantiate and formulate a diagnosis | 1 | 0.8 | 0.6 | 0 |
| 4 | Make a treatment plan | 1 | 0.8 | 0.6 | 0 |
| Total: | | 4.0 | 3.0 | 2.0 | 0 |


Checklist for SRO

| Evaluation criteria | Unsatisfactory 0-49 | Satisfactorily 50-69 | Fine 70-89 | Great 90-100 points | Exhibition laziness score |
|--|------------------------------|--|---|--|---------------------------|
| Demonstrates knowledge and understanding of medical research | Doesn't show | Chaotic, detailing irrelevant facts | Knowledge with the fixation of facts that do not give a complete picture of the essence of the research | Knowledge is systematic, fully reflects the understanding of research in the field of medicine | |
| Able to solve problems within their qualifications based on scientific approaches | Incapable of problem solving | Makes decisions with difficulty, cannot justify | Decisions are right justification partial | Decisions are right justifications are given in full | |
| Uses scientific information and the principles of evidence-based medicine to develop within their qualifications | Does not use | Uses incorrect or inaccurate information | Uses partially | Uses in full | |
| Demonstrates introspection skills | Doesn't show | the diagnosis is justified chaotically, unconvincingly | adequate, but with minor omissions | In full, adequate | |
| Uses oratory and public speaking at in-hospital conferences, | Does not perform | Performs, rarely, without enthusiasm | Speeches and reports with minor inaccuracies | Speaks and reports, wins an audience, is | |

| | | | | | |
|---|---------------------------|--|---|---|--|
| seminars, discussions | | | | persuasive in his speeches | |
| Able to conduct research and work for a scientific result | Does not conduct research | Conducts research, but cannot systematize them | Conducts research, conclusions are partial, the analysis is not complete. | Conducts research, draws conclusions from research, publishes | |
| Final score | | | | | |

| 10.2 Multi-point system of knowledge assessment | | | |
|---|------------------------------|------------|--|
| Grading by letter system | Digital equivalent of points | Percentage | Assessment according to the traditional system |
| A | 4.0 | 95-100 | Great |
| A - | 3.67 | 90-94 | |
| B + | 3.33 | 85-89 | Fine |
| IN | 3.0 | 80-84 | |
| IN - | 2.67 | 75-79 | |
| C + | 2.33 | 70-74 | |
| WITH | 2.0 | 65-69 | Satisfactorily |
| WITH - | 1.67 | 60-64 | |
| D+ | 1.33 | 55-59 | |
| D- | 1.0 | 50-54 | |
| FX | 0.5 | 25-49 | unsatisfactory |

| 11. Learning Resources | |
|---|--|
| Electronic textbooks | 1. Internaldisease- V.S. Moiseev, A.I. Martynov, N.A. Mukhin. Volume 1 https://t.me/medknigi_arhiv/149 2. Clinicalnephrology. Skvortsov V., Tumarenko A. 2017 https://kingmed.info/knigi/Yrologia_i_nefrologia/book_4549/Klinicheskaya_nefrologiya-Skvortsov_VV_Tumarenko_AV-2017-pdf 3. Nephrology. Usanova A.A., 2019 https://t.me/medknigi_arhiv/512 4. Internal illnesses. The cardiovascular system. Roitberg. A.V. Strutynsky. 2019 https://t.me/medknigi_arhiv/514 5. Internaldisease. Diseases respiratory organs. Trukhan D.I., Viktorova I.A., 2013 https://t.me/medknigi_arhiv/426 6. Treatment Guidediseases domesticorgans. Volume 5 A.N. Okorokov. 2018 https://t.me/medknigi_arhiv/295 |
| Electronic resources, limited to: databases including, but not limited to, simulation animations, professional blogs, websites, other electronic reference materials (for example: video, audio, digests) | 1. Stryuk R.I. Internal diseases [Electronic resource]: Part 1: textbook /R.I. Stryuk, I.V. Maev - Almaty: Evero publishing house, 2020. - 296 pp. Epigraph. 2. Stryuk R.I. Internal diseases [Electronic resource]: part 2: textbook /R.I. Stryuk, I.V. Maev - Almaty: Evero publishing house, 2020. - 284 pp. Epigraph. 3. Clinical guidelines 2020 Arterial hypertension in adults. https://youtu.be/3pjNOCw2PwM 4. Chronic kidney disease. Acute kidney injury. Tatyana Adasheva. https://youtu.be/gfAYX1BGpWU |
| Laboratory/Physical Resources | http://lib.ukma.kz |
| Special programs | http://10.10.202.52 http://89.218.155.74 |

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| ОҢТҮСТІК-ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ |  SKMA -1979- | SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия» |
| Department of Therapy and Cardiology | | 044-51/11 |
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| | |
|--------------------------------|---|
| Journals (electronic journals) | Republican Interuniversity digital library http://rmebrk.kz/ |
| Electronic resources | OKMA Repository http://lib.ukma.kz/repository/ Republican interuniversity electronic library http://rmebrk.kz/ "Aknurpress" digital library https://aknurpress.kz/login "Zan" database of legal acts https://zan.kz/ru "Paragraph Medicine" information base https://online.zakon.kz/Medicine/ |
| Literature | http://www.studmedlib.ru |

| |
|---|
| 12. Politics of discipline |
| <ul style="list-style-type: none"> - Missing classes without a good reason is not allowed. - Make up missed classes in a timely manner for a good reason. - Attending classes, TSIS and lectures on time. - The student must have an appropriate dress (robe, cap, change of shoes, etc.). - The student has a medical sanitary book. - Timely completion of tasks under the SRS. - The student must treat teachers and fellow students with respect. <p>Careful attitude of students to the property of the department.</p> <p>Training requirements, penalties</p> <ul style="list-style-type: none"> - a penalty point for missing one lecture without a good reason is 1.0 points; - a student who does not appear at the boundary control without a valid reason is not allowed to take the exam in the discipline. A student who did not appear at the border control for a good reason, immediately after he started classes, submits an application addressed to the dean, provides supporting documents (due to illness, family circumstances or other objective reasons), receives a work sheet that is valid for the period referred to in paragraph 12.4. The results of midterm control are provided to the dean's office in the form of a report before the end of the control week. - The SIW score is set in the SIWT classes according to the schedule in the academic progress journal and the electronic journal, taking into account penalty points, is subtracted from the SIW marks). - if you miss one session of the SIWT - a penalty point of 2.0; - A student who has not scored a passing score (50%) in one of the types of controls (current control, boundary control No. 1 and / or No. 2) is not allowed to take the exam in the discipline. |

| |
|--|
| 13. Academic policy based on the moral and ethical values of the academy |
| <p>www.ukma.kz, → section Academic policy. P. 4 Student Honor Code</p> <p>Grading policy for the discipline</p> <ul style="list-style-type: none"> - Frontier control knowledge of students is carried out at least twice during one academic period on 8/12 days of theoretical training with putting down the results of milestone controls in the educational journal of progress and the electronic journal, taking into account penalty points for missing lectures (missing lectures in the form of penalty points are deducted from the grades of boundary control). - The results of midterm control are provided to the dean's office in the form of a report before the end of the control week. - The examination grade is set on the basis of the results of the current and midterm controls - the assessment of the admission rating (ORA) (60%) and the final control - the marks on the exam (40%). - ORD (Admission Rating Score) is defined as the average score for practical training, SRS, and midterm control. - A student who has scored a minimum score of the ORD equal to 1 (15%) and above is allowed to take the exam. - The final grade for the discipline will be the sum for the current performance (ARA) and the grade for the exam. The final score according to the point-rating letter system is: <ul style="list-style-type: none"> - percentage of final grade - Digital equivalent of points - letter equivalent of points - assessment according to the traditional system |

Guidelines for students on the analysis of a scientific article, provide an abstract

1. Read article.

2. Specify the structure of the article:

- 1) Name
- 2) Authors
- 3) publishing house
- 4) Summary
- 5) General part (introduction, purpose, materials and methods, results and discussion)
- 6) conclusions
- 7) Bibliography

3. When analyzing the content of a scientific article, the student must:

- 1) Justify the urgency of the problem
- 2) Explain the purpose of the work, the materials and methods used in the work
- 3) State the content of the work
- 4) Justify the conclusions

4. Answer additional questions (on the topic of the article for the discipline)

- 1) Definition of pneumonia
- 2) Classification of pneumonia
- 3) Pathological anatomy of lobar pneumonia, bronchopneumonia, focal pneumonia
- 4) Features of the morphology of pneumonia depending on the etiological factor
- 5) Complications of pneumonia
- 6) Causes of death in pneumonia

Evaluation criteria (checklist)

| Evaluation criterion / score in % | Poor/0-49% | Fair/65-54% | Good/70-89% | Excellent/90-100% |
|-----------------------------------|--|--|---|---|
| Article structure | 1) does not name the structural components of a scientific article | 1) does not follow the order of the structure of a scientific article when listing, skips components | 1) Lists the structural components of a scientific article, but violates the order of the structure | 1) Respects 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 |
|--|--|--|---|--|
| Analysis of the content of a scientific article | 1) Does not understand the relevance of the problem, is not able to discuss the content of the article | 2) Understands the urgency of the problem 3) Lists the purpose of the work, the materials and methods used in the work 3) understands the content of a scientific article 4) Lists conclusions, bibliography in this article | 4) Assumes the urgency of the problem 5) Explains the purpose of the work, the materials and methods used in the work 3) outlines the content of a scientific article 4) Substantiates conclusions 5) Justifies the selected list of references in this article | 1) Independently substantiates and argues the relevance of the problem 2) Explained defines the purpose of the work, the materials and methods used in the work 3) Freely expresses the semantic content of a scientific article 4) Arguments and substantiates conclusions 5) Has the skill of using literature and justifies the selected list of references in this article |
| Answer to additional questions (on the topic of the article for the discipline) | 1) Does not answer additional questions on the topic | 1) Gives incomplete answers to additional questions Definition of pneumonia Classification of pneumonia Pathological anatomy of lobar pneumonia, bronchopneumonia, focal pneumonia Features of the morphology of pneumonia depending on the etiological factor | 1) Apply the acquired knowledge in a practical lesson on the topic to answer Definition of pneumonia Classification of pneumonia Pathological anatomy of lobar pneumonia, bronchopneumonia, focal pneumonia Features of the morphology of pneumonia depending on the etiological factor | 2) Apply the acquired knowledge in a practical lesson on the topic to answer Definition of pneumonia Classification of pneumonia Pathological anatomy of lobar pneumonia, bronchopneumonia, focal pneumonia Features of the morphology of pneumonia depending on the etiological factor |

| | | | | |
|--|--|------------------------------|------------------------------|------------------------------|
| | | Complications of pneumonia | Complications of pneumonia | Complications of pneumonia |
| | | Causes of death in pneumonia | Causes of death in pneumonia | Causes of death in pneumonia |




Criteria for evaluating project work

| Criteria "Goal setting and project planning" | Points |
|---|-------------------------|
| Goal not stated | unsatisfactory 0-49% |
| The goal is formulated, but there is no plan to achieve it | satisfies 50-69% |
| The goal is formulated, justified, a schematic plan for its achievement is given | Fine 70-89% |
| The goal is formulated, clearly justified, a detailed plan for its achievement is given. | Great 90-100% |
| Criterion "Statement and justification of the project problem" | |
| The problem of the project is not formulated | unsatisfactory 0-49% |
| The formulation of the project problem is superficial. | satisfies 50-69% |
| The problem of the project is clearly formulated and justified | Fine 70-89% |
| The problem of the project is clearly formulated, justified and has a deep character | Great 90-100% |
| Criterion "The variety of sources of information used | |
| Information not relevant to the topic and purpose of the project was used | unsatisfactory 0-49% |
| Most of The information provided is not related to the topic of the work. | satisfies 50-69% |
| The work contains a small amount of relevant information from a limited number of similar sources. | Fine 70-89% |
| The work contains sufficiently complete information from various sources. | Great 90-100% |
| Criterion "The depth of disclosure of the theme of the project" | |
| The topic of the project is not disclosed | unsatisfactory 0-49% |
| The theme of the project is disclosed in fragments | satisfies 50-69% |
| The topic of the project is disclosed, the author showed knowledge of the topic within the framework of the work program for the discipline under study | Fine 70-89% |



| | |
|--|-------------------------|
| The topic of the project is disclosed exhaustively, the author has demonstrated deep knowledge that goes beyond the scope of the work program being studied | Great 90-100% |
| Criterion "Analysis of the progress of work and the results obtained, conclusions" | |
| No attempt has been made analyze progress and results | unsatisfactory 0-49% |
| The analysis is replaced by a brief description of the progress and order of work | satisfies 50-69% |
| A detailed result of the work to achieve the goals stated in the project is presented. | Fine 70-89% |
| Comprehensive analysis presented results work, the necessary conclusions are made, the prospects for work are outlined | Great 90-100% |
| Criterion "Achievement of the goal and compliance with the content of the project" | |
| The goals stated in the project were not achieved | unsatisfactory 0-49% |
| Substantial part the methods of work used do not correspond to the theme and purpose of the project | satisfies 50-69% |
| The methods of work used correspond to the theme and purpose of the project, but are insufficient | Fine 70-89% |
| Methods of work are sufficient and used appropriately and effectively, project objectives are achieved | Great 90-100% |
| Criterion "Personal participation, creative approach to work" | |
| The work is template, showing the formal attitude of the author | unsatisfactory 0-49% |
| The author showed little interest in the topic of the project, but did not demonstrate independence in work, did not use the possibilities of a creative approach | satisfies 50-69% |
| Independent work demonstrating insufficient full participation , an attempt was made to present a personal view on the topic of the project, elements of creativity were applied | Fine 70-89% |
| The work is distinguished by a creative approach, full participation and the author's own original attitude to the idea of the project. | Great 90-100% |
| Criterion "Compliance with the requirements for the design of the written part" | |
| The written part of the project does not meet the requirements, all sections of the work are not disclosed and the work is not submitted on time | unsatisfactory 0-49% |
| In the written part of the work all sections are partially disclosed, fundamental mistakes | satisfies 50-69% |
| Meet at work typos, incorrect expressions | Fine 70-89% |
| The work fully reflects: relevance of the topic, novelty and practical significance, conclusions, recommendations, the degree of problem solving and completion of the work, the correctness of its formulation, the author's acquaintance with scientific literature, the depth of discussion, the literacy of the presentation and the work was delivered on time according to the schedule | Great 90-100% |

| Criterion "The quality of the presentation" | |
|--|-------------------------|
| There are a large number of fundamental errors in the presentation and answering questions. | unsatisfactory 0-49% |
| There are some minor fundamental errors and inaccuracies in the presentation; when answering questions, partial fundamental errors | satisfies 50-69% |
| The presentation contains typos, incorrect expressions, some non-fundamental errors, inaccuracies in answering questions | Fine 70-89% |
| The presentation in terms of style, presentation of information, content, text meets the general requirements for presentation design. The author confidently and accurately answers questions | Great 90-100% |
| Criterion "Quality of the final product" | |
| Project product missing | unsatisfactory 0-49% |
| Design product does not meet quality requirements (aesthetics, usability, fit for purpose) | satisfies 50-69% |
| The product does not fully meet the quality requirements | Fine 70-89% |
| The product fully complies with the quality requirements (aesthetic, convenient to use, meets the stated goals) | Great 90-100% |

| 14. Approval and revision | | | |
|------------------------------------|--------------|-------------------------------------|---|
| Date of approval at the department | Protocol No. | FULL NAME. manager | Signature |
| 31.08.2022 | №1 | Asanova G.K. |  |
| Date of revision | Protocol No. | FULL NAME. manager | Signature |
| 25.11.2022 | №4 | Asanova G.K. |  |
| CPC revision date | Protocol No. | FULL NAME. COP Chairman | Signature |
| 26.12.2022 | №4 | MD, acting Professor Sadykova A.Sh. |  |