SYLLABUS

Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery
Working training program of the discipline: «Neurology»
Title and code of the educational program «General Medicine»6B10101

1.	General information about the course		
1.1	Course Code:Neur 5306	1.6	Academic year:2024-2025
1.2	Course name:Neurology	1.7	Year:5
1.3	Prerequisites: morphology and physiology, pathology of organs and systems, introduction to the clinic, pharmacology, the basics of childhood diseases 1, 2, the basics of internal diseases 1, 2.	1.8	Term:9
1.4	Post-requisites: neurology in general practice	1.9	Number of credits (ECTS):5 150 hours
1.5	Cycle: PD	1.10	Component: HEIC
2.	**Course description (maximum 50 words)**		
The discipline forms fundamental theoretical knowledge of the patterns of structure and functions of the nervous system, symptoms and syndromes of damage to its various departments, blood supply to the central nervous system, and also studies the etiology, pathogenesis, methods of diagnosis, treatment and prevention of neurovascular, neuromuscular, demyelinating diseases, motor disorders.			
3.	**Summative assessment form**		
3.1	Testing	3.5	Coursework
3.2	Writing	3.6	Essay
3.3	Oral✓	3.7	Project
3.4	OSPE / OSCE or Practical Skills Acceptance	3.8	Other (specify)
4.	**Discipline objectives**		
The formation of knowledge, skills and practical skills necessary: for the early diagnosis of neurological, mental and narcological diseases in adults and children in the clinic and at home; for carrying out a complex of medical and preventive measures at the pre-hospital stage and in the treatment of neurological, mental and narcological diseases of patients at home; for the diagnosis of emergency conditions and the provision of medical care for neurological, mental and narcological diseases at the pre-hospital and hospital stage and the determination of forensic psychiatric and narcological examinations.			
5.	**Learning outcomes (Course learning outcomes)**		
CLO1.	Demonstrates knowledge of the basics of diagnosing neurological patients; clinical indications for hospitalization; home management rules		
CLO2.	Participates in the preparation of patients taking part in the implementation of laboratory and instrumental methods of research; applies safety principles when working with neurological patients, participates in the organization of preventive measures; applies methods of scientific research and academic writing in neurology; applying knowledge and understanding of facts, events, theories and complex dependencies between them in neurology; understands the importance of the principles and culture of academic integrity;		
CLO3.	Formulates a standard definition of urgent neurological, mental and drug addiction conditions; medical history in these patients;		
CLO4.	Observes the principles at work confidentially with neurological, psychiatric and substance abuse patients, independently solve problems in the field of professional activity. Forms positive relationships with colleagues		

CLO 5.	Uses of treatment protocols for selecting a drug					
CLO6.	Interprets, justifies the history data, prepares medical records					
CLO 7.	Aware of the need to maintain confidentiality in professional relationships when working with neurological, mental and narcological patients, is willing to work independently. Demonstrates commitment to professional ethics.					
5.1	**Course learning outcomes**	The learning outcomes of the EP, which are related to the learning outcomes of the course				
	CLO 1 CLO 2 CLO 3	CLO1 Provides patient-centered care in the field of biomedical, clinical, epidemiological and socio-behavioral sciences for the most common diseases.				
	CLO 4 CLO5	CLO2Carries out his/her activities within the framework of the legislation of the Republic of Kazakhstan in the field of healthcare, is guided by them in his/her practical activities to ensure optimal medical care.				
	CLO 7	CLO3Adheres to the rules of ethics, deontology and subordination, demonstrates interpersonal and communication skills that lead to effective information exchange and cooperation with patients, their families and medical professionals.				
	CLO 6	CLO 4Conducts effective measures aimed at the diagnosis, treatment, prevention of common and early forms of diseases.				
6.	**Details of thecourse**					
6.1	Location (building, auditorium): Medical Centre “Ai Nury”,microdistrict 4, 22/2. Email address: kafedranevrologii@bk.ru					
6.2	Number of hours	Lectures	Prac. Lessons	SIW	SIWT	Preparation and conduct of final certification
		15	35	56	30	14

7.	**Information about teachers**				
№	**Full name**	**Degrees and title**	**Email address**	**Scientific interests, etc..**	**Achievements**
1.	Polukchi Tatyana Vasilyevna	PhD doctor, assistant	E-mail: tatyana_polukchi@mail.ru Contact number: 87479838388	Research interests: adult and pediatric neurology, instrumental research methods in neurology.	Author of more than 70 scientific articles
2.	Esetova Aynur Amirhanovna	Assistant	*E-mail:* esetova.aynura@mail.ru Contact number: 87789474404	Research interests: neurology.	Author of more than 30 scientific articles
3.	Abdraimova Saltanat Orynbasarovna	Assistant	E-mail: salta1403@mail.ru Contact number: 87018820308	Research interests: angioneurology, neurology.	Author of over 10 scientific articles

4.	Alyeva Ainaz Shasidinovna	Assistant	E-mail: salta1403@mail.ru Contact number: 87756310966	Research interests: angioneurology, neurology.	Author of over 7 scientific articles

8.	**Thematic plan**					
Week/ Day	**Topic**	**Summary**	**Course learning outcomes**	**Number of hours**	**Forms / methods / learning technologies**	**Forms / assessment methods**
1	**Lecture. Theme:** Introduction to the specialty. Structural elements of the nervous system. Transmission of information in the nervous system. Sensitivity, symptoms and syndromes of lesion, research methods.	Description and history of development of neurology. Transmission of information in the nervous system. Mediators and receptors. Ascending pathways of the spinal cord, classification of types of sensitivity, symptoms and syndromes of damage.	CLO 2	2	Review	Feedback
	Practical lesson. Theme: Sensitivity, symptoms and syndromes of lesion, research methods.	Peripheral and central sections of the somatosensory system. Anterior spinotalomic tract. Lateral spinotalomic tract. Sensory disorders depending on the level of damage to sensitive pathways. Superficial and deep sensitivity studies. Syndromes of disorders of superficial and deep sensitivity. Topical diagnosis of sensory lesions.	CLO 1	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the	Nosology to the selected student must make a clinical case:	CLO 1	3-5	Format of delivery Microsoft	Assesment of the quality of

	implementation of SIW 1. SIW task 1. Transverse myelitis 2. Multiple sclerosis 3. Guillain-Barré syndrome	complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project topic: Clinical and demographic analysis of Parkinson's disease in the southern region of Kazakhstan** **Plan:** 1) Identification and concretization of the problem and definition of the goal, objectives, hypothesis of the project. Development of the concept of the project. Selecting the type of project product; 2) Determination of methods for solving the problem, sources of information (databases, regulatory documentation, etc.), methods for collecting and analyzing it. 3) Determining how to present the result, project structure, content, drawing up a roadmap, distribution of roles in the project. 4) Working with information. Conducting research, calculations. Application of data processing methods,			PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	design, oral questioning.

		analysis methods and tools, etc. 5) Implementation of the developed action plan of the project. Project design. Collective analysis of project results and self-assessment. Project protection. Responsible for the project: Zharkinbekova N.A., Abdraimova S.O. - determination of the leaders of the project activities of students and the organization of project teams; - definition of the topic; - identifying one or more problems; - clarification of the goals of the final result; - getting advice from project participants on the use of the Trello board in project work.				
2.	**Lecture. Theme** The pyramidal system, symptoms and syndromes of lesion, research methods.	Central division pyramidal system and syndromes his defeat. Motor zones of the cortex. Cortico-spinal and cortico-nuclear pathways. Syndromes of the defeat of the central part of the pyramidal system. The peripheral division of the pyramidal system and syndromes of its defeat. Topical diagnosis of the defeat of the pyramidal system.	CLO 2	2	Review	Feedback

	Practical lesson. Theme Pyramidal system, symptoms and syndromes of lesion, research methods.	Central Components of the Motor System and Clinical Syndromes of lesions affecting them. Motor cortical areas. Corticospinal tract (Pyramidal tract) and Corticonuclear (Corticobulbar) Tract. Lesions of central motor pathways.	CLO 1	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Amyotrophic lateral sclerosis 2. Stroke the spinal cord 3. Acute disseminated encephalomyelitis 4. The syndrome of infringement of the brachial plexus 5. Syndrome infringement of the radial nerve 6. infringement of the ulnar nerve syndrome 7. The median nerve syndrome infringement	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. For the selected nosology, the student must draw up a clinical case: complaints, anamnesis and general examination, diagnosis and differential. diagnosis, treatment tactics and prognosis. **Project:** - determination of the leaders of the project activities of students and the organization of project teams; - definition of the topic; - identifying one or more problems; - clarification of the goals of the final result;	CLO 1	3-5	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questioning

		- getting advice from project participants on the use of the Trello board in project work.				
3.	**Lecture. Theme** The extrapyramidal system symptoms and syndromes of lesion, research methods. Cerebellum. Afferent and efferent pathways of the cerebellum. Cerebellar function and syndromes of its defeat.	The structure and role of the extrapyramidal system in human motor function. Basic clinical syndromes of defeat extrapyramidal system: akinetic-rigid syndrome, hyperkinetic syndrome. Topical diagnosis of lesions of the extrapyramidal system.	CLO 2	2	Review	Feedback
	Practical lesson. Theme The extrapyramidal system symptoms and syndromes of lesion, research methods. Cerebellum. Afferent and efferent pathways of the cerebellum. Cerebellar function and syndromes of its defeat.	The structure and role of the extrapyramidal system in human motor function. The main clinical syndromes of extrapyramidal system lesion: akinetic-rigid syndrome, hyperkinetic 2yndrome. Topical diagnosis of extrapyramidal system lesions. Cerebellum. The internal structure of the cerebellum. Afferent and efferent projections of the cerebellar cortex. Cerebellar function and syndromes of its defeat: vestibulocerebellar, spinocerebellar and cerebrocerebellar syndrome. Methods for studying cerebellar function. Topical diagnosis of cerebellar lesions.	CLO 2	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material

	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Disease of Wilson - Westphal - Konovalov 2. Chorea of Huntington. 3. Myasthenia Gravis	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - determination of the leaders of the project activities of students and the organization of project teams; - definition of the topic; - identifying one or more problems; - clarification of the goals of the final result; - getting advice from project participants on the use of the Trello board in project work.	CLO 2	3-5	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questioning.
4.	**Lecture. Theme** Functions and methods of the examination 12 pairs of cranial nerves. I, II, III, IV, V, VI pairs of cranial nerves.	Brainstem: medulla, pons, midbrain. Topographic anatomy of the brain stem. Motor, sensory and mixed cranial nerves. CN: nuclei, composition and functions of 1-6 pairs of cranial nerves.	CLO 2	2	Review	Feedback
	Practical lesson. Theme Functions and methods of the examination 12 pairs of cranial nerves. I, II, III, IV, V, VI pairs of cranial nerves.	Brainstem: medulla, pons, midbrain. Topographic anatomy of the brain stem. Motor, sensory and mixed cranial nerves. CN: nuclei, composition and functions of 1-6 pairs of cranial nerves.	CLO 2	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material

	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Neuralgia of the trigeminal nerve 2. Refsum's disease	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - analysis of the problem, hypotheses, substantiation of each of the hypotheses; - selection of the optimal solution to the problem; - determination of sources of information, methods of its collection and analysis; - distribution of roles in the team; - setting goals and discussing the criteria for evaluating results; - determining how the results will be presented.	CLO 3	3-5	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questioning.
5.	**Lecture. Theme** Functions and research methods of 12 pairs of cranial nerves. VII, VIII, IX, X, XI, XII pairs of cranial nerves	Brain stem: medulla oblongata, bridge, midbrain. Brain stem topographic anatomy. Motor, sensory and mixed cranial nerves. CN: nuclei, composition and functions of 7-12 pairs of cranial nerves. Alternating syndromes. Topical diagnosis of lesions of the cranial nerves. Methods for studying the function of the cranial nerves.	CLO 2	2	Review	Feedback

	Practical lesson. Theme Functions and research methods of 12 pairs of cranial nerves. VII, VIII, IX, X, XI, XII pairs of cranial nerves	Brain stem: medulla oblongata, bridge, midbrain. Brainstem topographic anatomy. Motor, sensory and mixed cranial nerves. CN: nuclei, composition and functions of 7-12 pairs of cranial nerves. Alternating syndromes. Topical diagnosis of lesions of the cranial nerves. Methods for studying the function of the cranial nerves	CLO 3	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Neuropathies and neuritis of the facial nerve. 2. Neuralgia of the glossopharyngeal nerve 3. Cochlear and vestibular neuropathies	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - analysis of the problem, hypotheses, substantiation of each of the hypotheses; - selection of the optimal solution to the problem; - determination of sources of information, methods of its collection and analysis; - distribution of roles in the team; - setting goals and discussing the criteria for evaluating results; - determining how the results will be presented.	CLO 3	2-4	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questioning.

		Interim project report				
	Cross-border control 1				Testing, Oral survey.	Testing, Oral survey.
6.	**Lecture. Theme** Higher mental /cognitive functions, symptoms and syndromes of lesion.Research methods.	Brain. Projection, associative, commissural fibers. Localization of functions in the cerebral cortex. Higher mental functions and syndromes of violation in the defeat of the cortex. Violations of gnosis, praxis, thinking, memory, speech, etc. Research methods of higher mental functions. Topical diagnosis of damage to higher mental functions.	CLO 1	2	Review	Feedback
	Practical lesson. Theme Higher mental /cognitive functions, symptoms and syndromes of lesion. Research methods.	Brain. Projection, associative, commissural fibers. Localization of functions in the cerebral cortex. Higher mental functions and syndromes of violation in the defeat of the cortex. Violations of gnosis, praxis, thinking, memory, speech, etc. Research methods of higher mental functions. Topical diagnosis of damage to higher mental functions.	CLO 4	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task	Nosology to the selected student must make a clinical case: complaints, history and general	CLO 4	2-4	Format of delivery Microsoft PowerPoint presentation,	Assesment of the quality of design, oral

	1.Marie-Foix-Alajuanin's ataxia. 2. Pierre-Marie's ataxia. 3. Gilles de Tourette's syndrome	examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - search for the necessary information, confirming or refuting the hypothesis; - adjustment of the algorithm of work on the project, taking into account intermediate results; - project implementation; - Interim report on project work.			glossary, TVL, Case-study, analysis of scientific medical articles.	questioning.
7.	**Lecture. Theme** The meninges of the brain. Liquor. Meningeal syndrome, intracranial hypertension syndrome. Modern laboratory instrumental, neuroimaging research methods in neurology	Dura mater. Arachnoid. Pia mater. The ventricular system of the brain. Functions of the cerebrospinal fluid. General cerebral symptoms. Shell symptoms. Diagnosis of diseases of the nervous system. Instrumental and laboratory methods in neurology. CT and MRI in neurology. Computed and magnetic resonance imaging in neurology. Angiography in neurology. Ultrasound in neurology. Myelography in neurology. Electroencephalography in neurology	CLO 1	1	Review	Feedback
	Practical lesson. Theme The meninges of the brain. Liquor.	Dura mater. Arachnoid. Pia mater. The ventricular system of the brain.	CLO 1	3	TBL, Case-study, thematic discussion.	tests, oral and written survey,

	Meningeal syndrome, intracranial hypertension syndrome. Modern laboratory instrumental, neuroimaging research methods in neurology	Functions of the cerebrospinal fluid. General cerebral symptoms. Shell symptoms. Diagnosis of diseases of the nervous system. Instrumental and laboratory methods in neurology. CT and MRI in neurology. Computed and magnetic resonance imaging in neurology. Angiography in neurology. Ultrasound in neurology. Myelography in neurology. Electroencephalography in neurology				working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Neurobrucellosis 2. Neurosyphilis	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - search for the necessary information, confirming or refuting the hypothesis; - adjustment of the algorithm of work on the project, taking into account intermediate results; - project implementation; - Interim report on project work.	CLO 1	2-4	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questioning.
8.	**Lecture. Theme** Blood supply to the brain and spinal	Blood supply to the brain. Arteries, veins of the brain. Blood	CLO 1	1	Review	Feedback

	cord. Vascular diseases of the central nervous system.	supply to the spinal cord. Ischemia of the brain and spinal cord. Intracranial hemorrhage. Topical diagnosis of damage to the vascular pools of the brain				
	Practical lesson. Theme Blood supply to the brain and spinal cord. Vascular diseases of the central nervous system. Damage to the nervous system with Covid 19. Acute cerebrovascular accident. Acute meningiencephalitis. Guillain-Barré syndrome. Features of diagnosis and treatment of neurological complications of coronavirus infection.	Blood supply to the brain. Arteries, veins of the brain. Blood supply to the spinal cord. Ischemia of the brain and spinal cord. Intracranial hemorrhage. Topical diagnosis of damage to the vascular pools of the brain. Damage to the nervous system with Covid 19. Acute cerebrovascular accident. Acute meningiencephalitis. Guillain-Barré syndrome. Features of diagnosis and treatment of neurological complications of coronavirus infection.	CLO 1	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Hemorrhagic stroke 2. Ischemic stroke 3. Aneurysm of cerebral vessels, cerebral hemorrhage	Collection of research information-literature (articles) published in scientific domestic and foreign journals (PubMed, MEDLINE, Web of Science and etc.) **Project:** - analysis of the obtained results; - project implementation; - preparation and presentation of the report.	CLO 1	2-4	Discussion, analysis and objective evaluation of scientific articles. Critical, stylistic and factor analysis.	Oral questioning on the Checklist.

9.	**Lecture. Theme** The concept of epilepsy. Etiology, pathogenesis, classification of epilepsy	Etiology, pathogenesis, classification of epilepsy. Mechanisms for the development of seizures in epilepsy. Triggers of epilepsy. Epileptic focus. Epileptic status, emergency care.	CLO 1	1	Review	Feedback
	Practical lesson. Them The concept of epilepsy. Etiology, pathogenesis, classification of epilepsy**e**	Etiology, pathogenesis, classification of epilepsy. Mechanisms for the development of seizures in epilepsy. Triggers of epilepsy. Epileptic focus. Epileptic status, emergency care.	CLO 6	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Photogenic primary generalized epilepsy 2. Traumatic brain injury 3. Spinal injury	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. Project: - analysis of the obtained results; - project implementation; - preparation and presentation of the report.	CLO 6	2-4	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questionin g.
10	**Practical lesson. Theme** Project: Clinical and demographic analysis of Parkinson's disease in the southern region of Kazakhstan	Project: - collective protection of the project - analysis of project implementation, results achieved (successes and failures);		2		

		- analysis of the achievement of the set goal; - evaluation of results, identification of new problems Project Protection				
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Amnestic syndrome 2. Broca's aphasia 3. Wernicke's aphasia 4. Paroxysmal disorders of consciousness	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - analysis of the obtained results; - project implementation; - preparation and presentation of the report.	CLO 6	2-4	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questionin g.
11	**Practical lesson. Theme** Autonomic nervous system, symptoms and syndromes of damage, research methods**.**	Hypothalamus. Afferent and efferent connections of the hypothalamus. Functions of the hypothalamus. The autonomic nervous system. Sympathetic and parasympathetic nervous system. Symptoms and syndromes of the lesion. Visceral and reflected pain. Research methods of the autonomic nervous system. Topical diagnosis of damage to the autonomic nervous system	CLO 6	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on	Nosology to the selected student must	CLO 6	3-5	Format of delivery	Assesment of the

	the implementation of SIW 1. SIW task 1. Meningococcal meningitis 2. Tuberculous meningitis 3. Tick-borne encephalitis	make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - analysis of the obtained results; - project implementation; - preparation and presentation of the report.			Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	quality of design, oral questioning.
12	**Practical lesson. Theme** Peripheral nervous system, symptoms and syndromes of damage, research methods.	Peripheral components of the motor system and clinical syndromes of lesions affecting them. Topical diagnosis clinical syndromes of lesions pyramidal tracts.	CLO 6	3	TBL, Case-study, thematic discussion.	tests, oral and written survey, working with didactic material
	SIWT. Consultation on the implementation of SIW 1. SIW task 1. Transient ischemic attack 2. Neuroinvasiveness and neurovirality of the SARS CoV virus. Cavernous sinus thrombosis associated with Covid-19.	Nosology to the selected student must make a clinical case: complaints, history and general examination, diagnosis and differential. diagnostics, treatment tactics and prognosis. **Project:** - analysis of the obtained results; - project implementation; - preparation and presentation of the report.	CLO 6	3-5	Format of delivery Microsoft PowerPoint presentation, glossary, TVL, Case-study, analysis of scientific medical articles.	Assesment of the quality of design, oral questioning.
13	**Cross-border control 2**				Testing, Oral survey.	Testing, Oral survey.
	Preparation and conduct of intermediate certification			14		

9.	**Training and Teaching Methods**	
9.1	Lectures	Review, thematic.
9.2	Practical lessons	Theme discussion, TBL, Case-study, a standardized method of patient-based clinical case (CBL), working with the medical literature. Testing, oral and written survey, interviewing, essays, working with didactic material, solving situational problems.
9.3	SIW / SIWT	working with educational and additional literature, solving and preparing test tasks for a clinical case developed by a student, analyzing scientific medical articles, working with a search database (PubMed, MEDLINE, Web of Science, etc.), self-supervision of patients, writing an educational case history, science project. preparation of essay to check for plagiarism; preparation and defense of the presentation; essay; preparation of first aid algorithms;
9.4	Mid-term examination	Decision of situational tasks. Demonstration of practical skills. testing.
10.	**Evaluation criteria**	

10.1 Criteria for evaluating the results of discipline training

№ RT	**Name of learning outcomes**	**Unsatisfactory**	**Satisfactory**	**Well**	**Excellent**
RT 1	Demonstrates knowledge of the basics of diagnosis of neurological diseases of adults and children; clinical indications for hospitalization; rules for the management of patients at home	Does not demonstrate the basics of the diagnosis of neurological diseases and clinical indications of adults and children;	Understands the basics of diagnosis of neurological diseases of adults and children	Applies knowledge in the diagnosis of neurological diseases and clinical indications in adults and children;	Analyzes and demonstrates knowledge of the basics of diagnosis of neurological diseases of adults and children; clinical indications for hospitalization; rules for managing patients at home

RT 2	Participates in the preparation of patients, participates in the implementation of laboratory and instrumental research methods; applies safety principles when working with mental and drug-related patients, participates in the organization of preventive measures; applies the methods of scientific research and academic writing in neurology, psychiatry and psychology; applies knowledge and understanding of facts, phenomena, theories and complex dependencies between them in neurology, psychiatry and psychology; understands the importance of the principles and culture of academic integrity;	Does not name the basics of performing laboratory and instrumental research methods and does not apply the methods of scientific research and academic writing in neurology, psychiatry and psychology; does not apply knowledge and understanding of facts, phenomena, theories and complex dependencies between them in neurology, psychiatry and psychology; does not understand the importance of principles and culture of academic honesty;	Understands the importance of work in the preparation of patients and the implementation of laboratory and instrumental research methods.	Applies knowledge in the preparation of patients and participates in the organization of preventive measures;	Analyzesregulatorydocuments
RT 3	Formulates a standard definition of acute neurological, mental and	Does not know how to determine acute neurological, mental and	Does not fully know how to determine acute neurological,	Determines acute neurological, mental and narcological conditions.	Formulates the definition of acute neurological, mental and

	narcological conditions; collection of anamnesis in this category of patients;	narcological conditions. He does not name the symptoms of acute neurological, mental and narcological conditions. Does not know the principles and features of collecting anamnesis in neurological, mental and narcological patients with acute conditions.	mental and narcological conditions. He does not fully name the symptoms of acute neurological, mental and narcological conditions. Does not fully know the principles and features of the collection of anamnesis in neurological, mental and narcological patients with acute conditions.	Names the symptoms of acute neurological, mental and narcological conditions.Knows and applies the principles and features of anamnesis collection in neurological, mental and narcological patients with acute conditions.	narcological conditions. Interprets and classifies symptoms and syndromes of neurological, mental and narcological conditions. Demonstrates the principles and analyzes the features of anamnesis collection in patients with acute neurological, mental and narcological conditions.
RT 4	Adheres to the principles of confidentiality when working with neurological, mental and narcological patients, independently solves problems in the field of professional activity. Formspositiverelationshipswithcolleagues.	Does not comply with the principles of confidentiality when working with neurological, mental and narcological patients. Does not know how to solve problems independently in the field of professional activity. Does not know the principles of forming positive relationships with colleagues.	Makes mistakes in maintaining confidentiality when working with neurological, mental and narcological patients. Does not fully solve problems in the field of professional activity independently. Does not fully understand the importance of the principles of forming positive relationships	Adheres to the principles of confidentiality when working with neurological, mental and narcological patients. Independently solves problems in the field of professional activity. Knows the principles of forming positive relationships with colleagues.	Demonstrates and adheres to the principles of confidentiality when working with neurological, mental and narcological patients. Independently makes decisions in problems in the field of professional activity. Analyzestheprinciplesofforming positiverelationshipswithcolleagues.

			with colleagues.		
RT 5	Uses treatment protocols to select a drug	Does not demonstrate knowledge of treatment protocols for neurological, mental and drug-related diseases. Does not know how to choose the necessary medicines.	Does not have sufficient confidence in the use of treatment protocols. Does not show a properly reasoned position in the choice of a drug.	In accordance with the requirements, he uses treatment protocols, but does not show independence of thinking. With inaccuracies, he argues his own position in the choice of a drug.	Demonstrates a complete understanding and knowledge of protocols, drugs of choice for a certain nosology. He shows independence of thinking and argues his own position in choosing a drug.
RT 6	Interprets, substantiates anamnesis data, draws up medical documentation	Does not know the technique of patient management, cannot justify and link the data of the conducted examinations	Allows inaccuracies and violates the logical sequence when filling out medical documentation .	Correctly describes the sequence of examinations and results, judgments differ in a comprehensive study of the patient's condition, small stylistic errors are made.	Demonstrates a comprehensive in-depth analysis and evaluation of data in the implementation of monitoring and patient care, competently fills in patient management diaries. Hasitsownreaso nedposition.
RT 7	He is aware of the need to maintain confidentiality in professional relationships when working with neurological, mental and narcological patients, and is willing to work independently. Demonstratescom mitmenttoprofessi onalethicalstandar ds.	Does not know the principles of confidentiality in professional relations when working with neurological, mental and drug-related patients. Does not know how to work independently. Does not show adherence to professional ethical standards.	He cannot single out the main thing in the principles of confidentiality in professional relations when working with neurological, mental and narcological patients. Does not know how to fully exercise independence.	Is aware of the need to maintain confidentiality in professional relationships when working with neurological, mental and narcological patients. Shows willingness to work independently. Demonstrates commitment to	Analyzes and justifies the need for confidentiality in professional relationships when working with neurological, mental and drug-related patients. Demonstrates independence in decision-making. Has its own position

			It does not sufficiently demonstrate adherence to professional ethical standards.	professional ethical standards	regarding adherence to professional ethical standards.

10.2 Evaluation criteria

Checklist for practical lessons

Form of control	Evaluation	Evaluation criteria
Oral and written response	**Excellent** Corresponds to the ratings: A (4,0; 95-100%); A- (3,67; 90-94%)	It is put in the event that the student did not make any mistakes or inaccuracies during the answer. Focuses on the theories, concepts and directions of the studied discipline and gives them a critical assessment, uses the scientific achievements of other disciplines.
	Good Corresponds to estimates: B+ (3,33; 85-89%); B (3,0; 80-84%); B- (2,67; 75-79%) C+ (2,33; 70-74%);	It is put in the event that the student during the answer did not make gross errors in the answer, made unprincipled inaccuracies or fundamental errors corrected by the student himself, managed to systematize the program material with the help of the teacher.
	Satisfactory Corresponds to estimates C (2,0; 65-69%); C- (1,67; 60-64%); D+ (1,33; 55-59%) D (1,0: 50-54%)	It is put in the event that the student made inaccuracies and unprincipled mistakes during the answer, was limited only to the educational literature specified by the teacher, and experienced great difficulties in systematizing the material.
	Unsatisfactory FX(0,5; 25-49%) F(0; 0-24%)	Placed in the case if student during the answer has made a fundamental error, not worked the basic literature on the topic; not able to use scientific terminology of discipline, answers with rough stylistic and logical errors.

Form ofcontrol	Evaluation	Evaluationcriteria
Performingtesttasks	**Excellent** Corresponds to the ratings: A (4,0; 95-100%); A- (3,67; 90-94%)	90-100% correctanswers

	Good Corresponds to estimates: B+ (3,33; 85-89%); B (3,0; 80-84%); B- (2,67; 75-79%) C+ (2,33; 70-74%);	70-89% correct answers
	Satisfactory Corresponds to estimates C (2,0; 65-69%); C- (1,67; 60-64%); D+ (1,33; 55-59%) D (1,0: 50-54%)	50-69% correct answers
	Unsatisfactory FX(0,5; 25-49%) F(0; 0-24%)	Less than 25% correct answers

Form of control	**Evaluation**	**Evaluation criteria**
Preparation and defense of the essay	**Excellent** Corresponds to the ratings: A (4,0; 95-100%); A- (3,67; 90-94%)	The problem formulated by the student is commented on based on the source text. The student gave at least 2 examples from the read text that are important for understanding the problem. There are no actual errors related to understanding the problem of the source text in the comment.
	Good Corresponds to estimates: B+ (3,33; 85-89%); B (3,0; 80-84%); B- (2,67; 75-79%) C+ (2,33; 70-74%);	The problem formulated by the student is commented on based on the source text. The student gave 1 example from the read text, which is important for understanding the problem. There are no actual errors related to the source text in the comment.
	Satisfactory Corresponds to estimates C (2,0; 65-69%); C- (1,67; 60-64%); D+ (1,33; 55-59%) D (1,0: 50-54%)	The problem of the text formulated by the student is commented based on the source text, but the student did not give any examples from the read text that are important for understanding the problem, or the comment made one factual error related to understanding the problem of the source text.
	Unsatisfactory FX(0,5; 25-49%) F(0; 0-24%)	The problem formulated by the student is not commented on or commented on without reference to the source text, or there is more than one factual error in the comment related to the understanding of the source text.

Form of control	**Evaluation**	**Evaluationcriteria**

Filling in didactic material	**Excellent** Corresponds to the ratings: A (4,0; 95-100%); A- (3,67; 90-94%)	The didactic material is filled in carefully, at the appointed time, filled in independently using at least 5 literary sources. Diagrams, tables and figures corresponding to the topic are filled in. Confidently and accurately answers all the questions asked.
	Good Corresponds to estimates: B+ (3,33; 85-89%); B (3,0; 80-84%); B- (2,67; 75-79%) C+ (2,33; 70-74%);	The didactic material is filled in carefully, at the appointed time, filled in independently using at least 4 literary sources. Diagrams, tables and figures corresponding to the topic are filled in. When answering questions, he makes unprincipled mistakes.
	Satisfactory Corresponds to estimates C (2,0; 65-69%); C- (1,67; 60-64%); D+ (1,33; 55-59%) D (1,0: 50-54%)	The didactic material was filled in sloppily and not delivered on time, filled in independently using less than 3 literary sources. When answering questions, he makes gross mistakes, does not Orient himself in the material.
	Unsatisfactory FX(0,5; 25-49%) F(0; 0-24%)	The job is not done.

Multi-point knowledge assessment system

Grade by letter system	Numeric equivalent of points	Percentage	Grade by traditional system
A	4,0	95-100	Excellent
A-	3,67	90-94	
B+	3,33	85-89	Good
B	3,0	80-84	
B-	2,67	75-79	
C+	2,33	70-74	
C	2,0	65-69	Satisfactorily
C-	1,67	60-64	
D+	1,33	55-59	
D-	1,0	50-54	
FX	0,5	25-49	Unsatisfactory
F	0	0-24	

11. Learning resources

Electronic resources, including, but not limited to: databases, animation simulators, professional blogs, websites, other electronic reference materials (for example: video, audio, digests)	1. Electronic library SKMA- https://e-lib.skma.edu.kz/genres 2. Republican Interuniversity Electronic Library (RMEB) http://rmebrk.kz/ 3. Digital library "Aknurpress" - https://www.aknurpress.kz// 4. Electronic library "Epigraph"- http://www.elib.kz/ 5. Epigraph is a portal of multimedia textbooks - https://mbook.kz/ru/index/ 6. ЭБС IPR SMART https://www.iprbookshop.ru/auth 7. Information and legal system "Law" https://zan.kz/ru

	8. Cochrane Library - https://www.cochranelibrary.com/
Electronic textbooks	1. Atlas of Neurology by Kispayeva T.T., 2015. https://www.aknurpress.kz/reader/web/1412 2. Modern Principles of Rehabilitation for Neurological Patients by Abdrakhmanova M.G., Epifantseva E.V., Shaikenov D.S., 2019. https://www.aknurpress.kz/reader/web/1410 3. Lectures on Neurology by Kispayeva T.T., 2014. Link https://www.aknurpress.kz/reader/web/1408 4. Dispensary Monitoring of Neurological Patients at the Outpatient Level: Study Guide by Anarbaeva A.A. - Turkestan: Turan, 2018. - 119 pages. - ISBN 978-601-243-899-4. Link http://rmebrk.kz/ 5. Neurology in Tables and Algorithms by Dushanova G.A. - Almaty: "Evero," 2020. - 104 pages. https://www.elib.kz/ru/search/read_book/3129/ 6. Neurology (Fundamentals of Topical Diagnosis) by Bokebaev T.T., Bokebaev Zh.T. - Textbook for Students. - Almaty: "Evero" Publishing House, 2020. - 136 pages. Link https://www.elib.kz/ru/search/read_book/3129/ 7. Neurology. Part 1, Study Guide by Dushanova. - Almaty: Evero, 2020. - 105 pages. Linkhttps: https://www.elib.kz/ru/search/read_book/790/ 8. Neurology. Part II, Study Guide by Dushanova. - Almaty: Evero Publishing House, 2020. - 188 pages. Link https://www.elib.kz/ru/search/read_book/179/ 9. General Neurology by Toleusarov A.M., Nurgozhaev E.S. - Almaty: "Evero" Publishing House, 2020. - 374 pages. Linkhttps: https://www.elib.kz/ru/search/read_book/181/ 10. Markova, M. P. The basis of neurology: educational and methodological manual / M. P. Markova, E. A. Homeland. — Tula: Tula State Pedagogical University named after L.N. Tolstoy, 2021. — 97 c. // Digital educational resource IPR SMART: [сайт]. — URL: https://www.iprbookshop.ru/119692.html 11. Ponomarev, V. V. Rare clinical cases in neurology (cases from practice): a guide for doctors / V. V. Ponomarev. — St. Petersburg: Foliant, 2020. — 364 c. // Digital educational resource IPR SMART: [сайт]. — URL: https://www.iprbookshop.ru/120017.html 12. Emergency neurology: early surgical prevention of atherothrombotic stroke in carotid artery stenosis and occlusion (decision-making algorithm): methodological recommendations / I. A. Vozniuk, P. V. Chechulov, S. Sh. Zabirov [and others]; edited by I. M. Barsukova. — St. Petersburg: Styx Firm, 2019. // Digital educational resource IPR SMART: [сайт]. — URL: https://www.iprbookshop.ru/120562.html
Laboratory physical resources	
Special programs	http://10.10.202.52 http://89.218.155.74

Journals (e-journals)	
Literature	**Main References:** 1. Kaishibaev, S. Neurology. 1 - book. Basics of topical and syndrological diagnosis: textbook / S. Kaishibaev. - Almaty: Evero, 2016 2. Kaishibaev, S. Neurology. Book 2. Special neuropathology [Text]: textbook / S. Kaishibaev. - Almaty: Evero, 2016. - 484 pages. s 3. Kispaeva, T. T. Lectures on neurology [Text]: educational tool / Vol. T. Kispaeva. - 3rd head. - Karaganda: AKNUR, 2019. - 168 p. s. 4. Akhmetova J.B. Semiotics of cranial nerve damage: textbook / Zh. B. Akhmetova. - 2nd research. - Karaganda: AKNUR, 2019. - 162 p 5. Akhmetova, Zh.B. - Karaganda: AҚNҰR, 2016 6. Kispaeva T. T. Atlas of neurology: textbook / T. T. Kispaeva. - 2nd ed. - Karaganda: AҚHҰP, 2019. - 126 p. 7. Gusev, E. I. Neurology and neurosurgery. In 2 volumes. T. 1. Neurology: textbook. - 4th ed. extra; Min. education and science of the Russian Federation. Recommended by the State Budgetary Educational Institution of Higher Professional Education "First Moscow State Medical University named after I.M. Sechenov." - M.: GEOTAR - Media, 2015. 8. Gusev, E. I. Neurology and neurosurgery. 2 volumes. 1 vol. Neurology [Text]: textbook / E. I. Gusev, A. N. Konovalov, V. I. Skvortsova; Kazakh language. aud. Sh. K. Omarova. - M.: GEOTAR - Media, 2016. - 488 pages. +people Opt. disk (CD-ROM) 9. Gusev, E. I. Neurology and neurosurgery. 2 volumes. 2 t. Neurosurgery textbook / Kazakh language. aud. Sh. K. Omarova. - M.: GEOTAR - Media, 2016. - 312 pages. s. **Additional literature** 1. Neurology. National leadership. Short version: manual / pod ed. E. I. Guseva. - M.: GEOTAR - Media, 2016. 1. Abdrakhmanova, M. G. Modern principles of rehabilitation of neurological patients: educational and methodological tool / M. G. Abdrakhmanova, E. V. Epifantseva, D. S. Shaikenov; Ministry of Health and Social Development of the Republic of Kazakhstan. KMSU. - Karaganda: AKNUR, 2015. 2. Abdrakhmanova, M. G. Modern principles of rehabilitation of neurological patients: teaching manual / M. G. Abdrakhmanova, E. V. Epifantseva, D. S. Shaikenov; Master of Health and Social Development of the Republic of Kazakhstan. KSMU. - Karaganda: IP "Aknur", 2015
12.	**Course policy**
Student requirements, attendance, behavior, grading policies, penalties, incentives, etc..	

• in the classroom, be in special clothing (white coats, caps);
• compulsory attendance of lectures and seminars according to the schedule;
• not be late for classes;
• do not miss classes, in case of illness, provide a certificate;
• work missed classes for a good reason at the time specified by the teacher;
• for each missed lecture, the penalty point is 1 point from the result of the RC for each lecture;
• for each pass of the SRO, the penalty point is 2 points from the result of passing the SRO;
• fulfill the SRO according to the schedule;
• visiting the SROP according to the schedule is obligatory !;
• each student is responsible for the sanitary condition of his workplace, for the observance of personal hygiene;
• the student should actively participate in the discussion of the topic of the lesson; be able to work in a team; must comply with medical ethics and deontology when working with patients and colleagues;
• the student must comply with the internal regulations of SKMA and the clinical base and safety rules; take good care of the property and equipment of the department and the clinical base.

If the sections of work are not completed, penalties are applied to students:
• if you miss lectures without a valid reason, the assessment of midterm control decreases - 1 point for each missed lecture;
• if an SRO is missed without a valid reason, the SRO score decreases - 2 points for each missed lesson;
• in case of untimely delivery of the SRO without a valid reason (later than the specified week), the SRO is not accepted;
• in case of a single violation of the discipline policy, the student is give a warning;
• in case of a systematic violation of the discipline policy, information about the student's behavior is transferred to the dean's office of the faculty;
• a student who has received an unsatisfactory mark for one of the types of control (midterm control 1, midterm control 2, average grade of current control) is not allowed to take the exam in the discipline

13.	**Academic policy based on the moral and ethical values of the academy**
	Academic policy. P. 4 Code of Honor Student
	Policy issuing evaluations on discipline
14.	**Approval and revision**

Date of approval with the Library and Information Center	Protocol № 9 16.06.2024	Head of the LIC Darbicheva R.Y	Signature
Date of approval by the Department	Protocol № 10 10.06.2024	Head of Department professor Zharkynbekova N.A.	Signature
Date of approval by the AC of the EP	Protocol № 11 14.06.2024	Head of CEP Kalmenov N.ZH	Signature