**AL-FARABI KAZAKH NATIONAL UNIVERSITY**

**Faculty of Medicine and Health Care**

**Higher School of Medicine**

**Department of Clinical Disciplines**

 **APPROVED**

**Dean of the Faculty**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (signature)**

**Kalmatayeva Zh.А.**

**"\_\_\_\_\_\_"\_\_\_\_\_\_\_\_ 2022**

**EDUCATIONAL-METHODOLOGICAL COMPLEX OF DISCIPLINE**

 **Неврология және психикалық денсаулық/Неврология и психическое здоровье/Neurology and mental health**

**DIRECTION OF TRAINING**

**6B101 HEALTHCARE**

**EDUCATIONAL PROGRAM**

 **6B10104 DENTISTRY BACHELOR**

**NPZ43068**

Course – 5

Semestr – 8

Credits – 6

**Almaty 2022**

The educational-methodical complex of the discipline was compiled by

Based on the educational program 6B10104 - Dentistry

Considered and recommended at a meeting of the Department of Clinical Disciplines

 «\_\_\_ » \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2022, protocol №

Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Prof. Kurmanova G.М.

 (signature)

Recommended by Methodical committee of Faculty

«\_\_\_\_» \_\_\_\_\_\_\_\_\_\_\_ 2022, protocol №

Head of Methodical committee of HSM\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Dzhumasheva R.Т.

 (signature)

**Al Farabi Kazakh National University**

**Faculty of Medicine**

**Department of Clinical Disciplines**

**APPROVED**

**Dean of Faculty**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Kalmatayeva Zh.А.**

**"\_\_\_\_\_\_"\_\_\_\_\_\_\_\_ 2022**

**SYLLABUS**

**8 semester -2022-2023 academic year**

**Academic information about course**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Discipline code | Discipline name | Type | Hours per week | ECTS |
| Practice | SIWT | СРО |  |
| **NPZ4306** | **Neurology and mental health** | PD MC | 80 | 20 | 20 | 4  |
|  |  |  |  |  |  |   |
|  |  |  |  |  |  |
| Course leader  | Full name, academic degree, academic title.  | Office Hours  | Schedule |
| e-mail  |  |
| Phone |  | The audience: |  |
| Assistant  | Full name, academic degree, academic title. | Office Hours  |  |
| e-mail  | E-mail:  |
| Phone | Phone:   | The audience: |  |

|  |  |
| --- | --- |
| Academic course presentation | Abstract of the discipline:– The discipline includes the study of pathogenesis, pathomorphology, clinical presentation of pathology of the nervous system, principles of diagnosis and treatment of the most common diseases of the nervous system. The training involves the development of clinical argumentation, analytical and problem-oriented thinking, a deep understanding of the problem in a clinical context; the formation and development of clinical diagnostic skills and the reasonable formation of a syndromic diagnosis.When studying the discipline, students will study the following aspects:1. Identify and interpret clinical symptoms and syndromes, data from a special neurological examination of patients with the most common neurological diseases2. Demonstrate the use of pharmaceuticals in diseases of the nervous system with an understanding of the mechanism of their action and drug interactions.3. Integrate knowledge and skills to ensure an individual approach in the treatment of a particular patient; teach to make professional decisions based on the analysis of the rationality of diagnosis and the principles of evidence-based medicine4. Demonstrate communication skills, teamwork skills, organization and management of the diagnostic and treatment process5. Demonstrate commitment to professional values such as altruism, compassion, empathy, responsibility, honesty and respect for the principles of confidentiality6. Demonstrate the skills and abilities of basic methods of psychotherapeutic care in order to prevent or treat conditions that may develop in patients in the practice of a dentist;7. Apply basic skills of special examination and examination and interaction with a "difficult" patient, including in emergency situations, teamwork skills, organization and management of the diagnostic and treatment process. |
| Prerequisite |  |
| Postrequisite |  |
| Informational resources | **Educational literature**: * Триумфов А.В. «Топическая диагностика заболеваний нервной системы», краткое руководство. Издательство «МЕДпресс-информ» (2015).
* Топический диагноз в нервологии по Петеру Дуусу: учебник/ П. Дуус; под ред. М. Бера, М. Фротшера. – 3-е изд.
* Bähr, M., & Frotscher, M. (2019). Duus’ topical diagnosis in neurology: Anatomy, physiology, signs, symptoms.
* Ropper, A. H., Samuels, M. A., & Klein, J. (2014). Adams and Victor’s principles of neurology.
* In Daroff, R. B., In Jankovic, J., In Mazziotta, J. C., In Pomeroy, S. L., & Bradley, W. G. (2016). Bradley's neurology in clinical practice.
* In Innes, J. A., In Dover, A. R., In Fairhurst, K., Britton, R., & Danielson, E. (2018). Macleod's clinical examination.
* Philip B Gorelick, Fernando B Testai, Graeme J Hankey, Joanna M Wardlaw (2014). Hankey’s clinical neurology.
* Hal Blumenfeld (2010) Neuroanatomy through clinical cases
* «Неврологиялық науқастарды клиникалық зерттеу әдістемесі» Методические рекомендации / С.У.Каменова и др. – Алматы, 2018.- 84с.
* Kamenova S.U., Kuzhubaeva K.K., Ospanbekova D.M. Methods of clinical examination of neurological patients / Methodical recommendations / S.U. Kamenova et al. – Almaty, 2018. – 82 pages.
* Uddin S., Rashid M. (eds.) Advances in Neuropharmacology-Drugs and Therapeutics. New York: Apple Academic Press, 2019. — 654 p.
* Hadi Manji, Seán Connolly, Neil Dorward, Neil Kitchen, Amrish Mehta, Adrian Wills (2007). Oxford handbook of neurology.
* Nicholas J Talley, Brad Frankum, Davis Currow (2015). Essentials of internal medicine.
* Paul W. Brazis, Joseph C. Masdeu, José Biller (2011). Localization in clinical neurology.
* Каменова С.У., Кужыбаева К.К., Оспанбекова Д.М. Методика клинического обследования неврологических больных: Учебное пособие / С.У.Каменова и др. – Алматы, 2018.- 84с.
* Обухов С.Г. Психиатрия: учебное пособие. /Под ред. Ю.А. Александровского. - М., ГЭОТАР-Медиа., 2007. - 352 с.
* Иванец Н.Н., Тюльпин Ю.Г. Психиатрия и наркология: учебник. — М., ГЭОТАР-Медиа, 2006. - 832 с.
* Пропедевтика психиатрии. Учебное пособие. В.Л. Гавенко, Г.А. Самардакова, В.И. Коростий и др. / Под ред.проф. В.Л. Гавенко. - Ростов-на-Дону «Феникс», 2003. -192с.
* 1. Edmund S. Higgins, Mark S. George. Illustrations by Edmund S. Higgins.
* «The Neuroscience of Clinical Psychiatry. The Pathophysiology of Behavior
* and Mental Illness».
* 2. Allan Tasman Professor and Chair, Jerald Kay Professor and Chair, Robert J. Ursano Professor and Chair. «The Psychiatric Interview. Evaluation and Diagnosis».
* 3. Fadem Barbara. Behavioral Science. Seventh Edition.
* 4. American Psychiatric Association. Diagnostic and statistical
* manual of mental disorders, 5th ed. Arlington: American
* Psychiatric Association, 2013.

**Internet-resources:** * https://geekymedics.com
* ncbi.nlm.nih.gov/PubMed/
* Medscape
* Up to Date
* Access Medicine
* Osmosis - <https://www.youtube.com/c/osmosis>
* Ninja Nerd - <https://www.youtube.com/c/NinjaNerdScience/videos>
* Cor Medicale - https://www.youtube.com/c/CorMedicale -медицинские видео анимации на русском языке.
* Lecturio Medical –
* <https://www.youtube.com/channel/UCbYmF43dpGHz8gi2ugiXr0Q>
* SciDrugs - https://www.youtube.com/c/SciDrugs/videos
 |
| Academic Policy of the Course in the Context of University Values  | **4th-5th year students must get a laptop or tablet****Rules of academic behavior in hospital:**1. Appearance:
* office clothing style ((shorts, short skirts, open t-shirts are not allowed to visit the university, jeans are not allowed in the hospital))
* clean ironed medical robe
* surgical suit (for surgery and obstetrics)
* medical mask
* medical cap (or neat hijab without hanging thoughts)
* medical gloves
* interchangeable shoes - closed (ballet flats for girls, you can crocs)
* neat hairstyle, neat short-cut nails
* badge with full name (full name)
1. Mandatory presence of a phonendoscope, neurological hammer, tonometer, centimeter tape (you can also have a pulse oximeter)
2. \* Properly executed sanitary (medical) book (before the start of classes and must be updated on time)
3. \* The presence of a vaccination passport or other document confirming a fully completed course of vaccination against COVID-19 and influenza
4. Mandatory observance of the rules of personal hygiene and safety
5. Systematic preparation for the educational process.
6. Accurate and timely maintenance of reporting documentation.
7. Active participation in medical-diagnostic and public events of the departments.

**A student without a medical book and vaccination will not be allowed to see patients.****Also, a student who emits a strong / pungent odor is not allowed to see patients, since such a smell can provoke an undesirable reaction in the patient (obstruction, etc.)****Discipline**:* It is not allowed to be late for classes or the morning conference. In case of being late, the decision on admission to the lesson is made by the teacher leading the lesson. If there is a good reason, inform the teacher about the delay and the reason by message or by phone. After the third delay, the student writes an explanatory note addressed to the head of the department indicating the reasons for being late and is sent to the dean's office to obtain admission to the lesson. If you are late without a valid reason, the teacher has the right to deduct points from the current grade (1 point for each minute of delay)
	+ Religious events, holidays, etc. are not a valid reason for skipping, being late and distracting the teacher and the group from work during classes.
	+ If you are late for a good reason - do not distract the group and the teacher from the lesson and quietly go to your place.
	+ Leaving the class ahead of time, being outside the workplace during school hours is regarded as absenteeism.
	+ Additional work of students during study hours (during practical classes and shifts) is not allowed.
	+ For students who have more than 3 passes without notifying the curator and a good reason, a report is issued with a recommendation for expulsion.
	+ Missed classes will not be made up.
* The internal regulations of the clinical bases of the department are fully applicable to students
* Greet the teacher and any senior by standing up (in class)
* Smoking (including the use of vapes, electronic cigarettes) is strictly prohibited on the territory of medical facilities (out-doors) and the university. Punishment - up to the annulment of boundary control, in case of repeated violation - the decision on admission to classes is made by the head of the department
* Respectful attitude towards colleagues regardless of gender, age, nationality, religion, sexual orientation.

**Academic values**:Academic honesty and integrity: independence in completing all assignments; the inadmissibility of plagiarism, forgery, the use of cheat sheets, cheating at all stages of knowledge control, deception of the teacher, attempts to manipulate and disrespectful attitude towards him. |
| Assessment and attestation policy | **Criteria assessment:**evaluation of work by type of activity according to the checklists of the department**Summative assessment:** final control in the discipline from 2 stages:1. MSQ Testing2. OSCE |

**Course content realization calendar:**

|  |  |  |
| --- | --- | --- |
|  | Topic Title | Number of hours |
|  | Introduction to clinical neurology. The main clinical syndromes in neurology and the concept of topical diagnosis. Sensitivity – concept, types, research methods, symptoms and syndromes of lesion | 8 |
|  | Violations of motor functions. The main symptoms of damage to the pyramidal and extrapyramidal systems | 8 |
|  | Anatomy and study of СN I-XII, I: temporal epilepsy; II: visual field defect, optic disc edema; III-IV-VI: visual disturbances, diplopia, anisocoria, pupillary reflex pathways, cortical blindness. Symptoms and syndromes of the lesion of the cerebellar angle. | 8 |
|  | Anatomy and study of СN I-XII, V Neuralgia and trigeminal neuropathy. | 8 |
|  | Caudal group of cranial nerves. Anatomy and research of cranial nerves I-XII. Syndromes of defeat of IX, X, XI, XII pairs of cranial nerves. IX-X: glossopharyngeal neuralgia, dysphagia, dysarthria; XI: torticollis; XII: central and peripheral lesions of the hypoglossal nerve. Bulbar and pseudobulbar signs. Torticollis. | 8 |
|  | Myofascial pain syndrome (pain dysfunction syndrome of the temporomandibular joint). Stomalgia, glossalgia, psychalgia. | 8 |
|  | Progressive hemiatrophy and hemihypertrophy of the face. Focal scleroderma. Parry-Romberg syndrome | 8 |
|  | Meningeal signs. Study of CSF, meningitis, causes of changes in the cellular composition of CSF, interpretation of the presence of blood in the CSF. Infectious diseases of the nervous system: secondary purulent meningitis in purulent-inflammatory processes of the maxillofacial region | 8 |
|  | ACVA. Classification of vascular diseases of the brain. | 8 |
|  | Paroxysmal disorders of consciousness - epilepsy. | 8 |
|  | ***Border control-1 (tests, mini-cex)*** |  |
| 11 | Introduction to the clinical discipline "Psychiatry". The main clinical and psychopathological symptoms and syndromes in psychiatry.  | 8 |
| 12 | The main groups of mental disorders and diseases. Schizophrenia. bipolar affective disorder. | 8 |
| 13 | The main groups of mental disorders and diseases. Neurotic, stress-related and somatoform disorders. | 8 |
| 14 | The main groups of mental disorders and diseases. | 8 |
| 15 | Emotional and behavioral disorders that usually begin in childhood and adolescence. | 8 |
| 16 | The main groups of mental disorders and diseases. | 8 |
|  | ***Border control-2 (tests, mini-cex)*** |  |

**For the course as a whole – overall admission rating (OAR)**

|  |  |
| --- | --- |
| Medical history | 30% |
| Border control 1 | 70% |
| **Total for BC-1** | 100% |
| 360 rating | 10% |
| Science project | 10% |
| Medical history | 20% |
| Border control 2 | 60% |
| **Total for BC-2** | 100% |

**Final grades for discipline: OAR 60% + Exam 40%**

**Exam (2 steps):**

Stage 1 - testing (40%)

Stage 2 - OSCE with a standardized patient (60%)**то дальше все проставлю**

**THEMATIC PLAN AND CONTENT OF PRACTICAL CLASSES**

| **№** | **Topic**  | **Resources**  | **Teaching Methods**  | **Content** |
| --- | --- | --- | --- | --- |
|  | Introduction to clinical neurology. The main clinical syndromes in neurology and the concept of topical diagnosis. Sensitivity - concept, types, research methods, symptoms and syndromes of damage. | Нервные болезни : учебн. пособие / А.А.Скоромец, А.П.Скоромец, Т.А.Скоромец; под ред. проф. А.В.Амелина, проф. Е.Р.Баранцевича. – 10-е изд., доп. – М. : МЕДпресс-информ, 2017. – 568 с. : ил. ISBN 978-5-00030-441-93. Bähr, M., & Frotscher, M. (2019). Duus' topical diagnosis in neurology: Anatomy, physiology, signs, symptoms. | CBLBrainstormDiscussion | Sensitivity: exteroceptive, proprioceptive, interoceptive, complex types. Afferent systems of somatic sensitivity and their structure: receptors, pathways. Anatomy and physiology of conductors of superficial and deep sensitivity. Epicritical and protopathic sensitivity. Types of sensory disorders. hypo- and hyperesthesia, paresthesia and pain, dysesthesia, hyperpathia, allodynia, causalgia. Types of sensitivity disorders: peripheral, segmental, conductive, cortical. Dissociated sensory disorder. Neuropathophysiological, neurochemical and psychological aspects of pain. antinociceptive system. Acute and chronic pain. Central pain. "Reflected" pain.Paraclinical research methods: electroneuromyography (study of the speed of conduction along the sensitive fibers of peripheral nerves, the study of the H-reflex), somatosensory evoked potentials.Temperature perception test: <https://www.youtube.com/watch?v=7it5E9OBl2k> Neurological sensory examination: <https://www.youtube.com/watch?v=XVOVpq-41BY> Neurological peripheral vibration test: <https://www.youtube.com/watch?v=iEfyHSm2fCA> Coordination and joint position sense: <https://www.youtube.com/watch?v=Z9yRlJelcTg> |
|  | Movement disorders. The main symptoms of damage to the pyramidal and extrapyramidal systems |  | CBL | Modern ideas about the organization of arbitrary movement. Cortico-muscular path: structure, functional significance. Central (upper) and peripheral (lower) motor neurons. Corticospinal tract: its functional significance for the organization of voluntary movements. Reflex arc: structure and function. Levels of reflex closure in the spinal cord and brain stem, significance in topical diagnostics. Superficial and deep reflexes, basic pathological reflexes, protective spinal reflexes. Regulation of muscle tone: spinal reflex arc, gamma system. Suprasegmental levels of regulation of the mental tone. Study of muscle tone. Neuropathophysiological bases of changes in physiological reflexes, pathological pyramidal reflexes, spasticity. Central and peripheral paresis: changes in mental tone and reflexes, trophism of the muscles. Clinical features of lesions of the cortical-muscular tract at different levels: brain (precentral gyrus, radiant crown, internal capsule, brainstem), spinal cord (lateral funiculus, anterior horn), anterior root, plexus, peripheral nerve, neuromuscular synapse, muscle.The structure and main connections of the extrapyramidal system, the role in the organization of movements; participation in the organization of movements by providing posture, mental tone and stereotyped automated movements. Neurophysiological and neurochemical mechanisms of regulation of the activity of the extrapyramidal system. Major neurotransmitters: dopamine, apetylcholine, gamma-aminobutyric acid.Hypokinesia (oligo- and bradykinesia), rigidity and muscle hypotension. Hyperkinesis: tremor, muscular dystopia, chorea, tics, hemiballismus, athetosis, myoclonus. Hypotonic-hyperkinetic and hypertensive-hypokinetic syndromes. Neuropathophysiology of extrapyramidal movement disorders, methods of pharmacological correction.Anatomical and physiological data: cerebellum and vestibular system: anatomy and physiology, afferent and efferent connections, role in the organization of movements. Clinical methods for studying the coordination of movements. Symptoms and syndromes of cerebellar damage: ataxia, dyssynergia, nystagmus, dysarthria, muscular hypotension. Ataxia: cerebellar, vestibular, frontal, sensitive. Pathophysiology and pharmacological methods of correction.Descending tracts of central nervous system (Pyramidal): <https://geekymedics.com/the-descending-tracts-of-the-central-nervous-system/> Upper Motor Neuron vs Lower Motor Neuron Lesion: <https://www.youtube.com/watch?v=lwTeoVZPuJM> Motor Neuron Disease: <https://www.youtube.com/watch?v=rxYSw6Xxgfs&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXFl0&index=43> Muscle power assessment (MRC Scale): <https://geekymedics.com/muscle-power-assessment-mrc-scale/> Muscle power test of the upper limbs: <https://www.youtube.com/watch?v=KZoQ2UkMFTA> Muscle power test of the lower limbs: <https://www.youtube.com/watch?v=Cjt0iFt2hL8> Active movements upper and lower limbs: <https://www.youtube.com/watch?v=JNN1736I5a0> Plantar reflex or Babinski sign: <https://www.youtube.com/watch?v=DkMN6u6Hcts> Gait abnormalities: <https://geekymedics.com/gait-abnormalities/>  Upper Motor Neuron vs Lower Motor Neuron Lesion: <https://www.youtube.com/watch?v=lwTeoVZPuJM> Cremasteric reflex: <https://www.youtube.com/watch?v=eVvInQNyXIU> Abdominal reflex: <https://www.youtube.com/watch?v=v4FyZydgHs0> Clonus: <https://www.youtube.com/watch?v=A67Od2Z_TpQ>The descending tracts of the CNS (extrapiramidal): <https://geekymedics.com/the-descending-tracts-of-the-central-nervous-system/> Anatomy of cerebellum: <https://geekymedics.com/cerebellum/> Parkinsons disease examination OSCE guide: <https://geekymedics.com/parkinsons-disease-examination-osce-guide/> Cerebellar examination OSCE guide: <https://geekymedics.com/cerebellar-examination-osce-guide/> **Rombergs test/sign: <https://www.youtube.com/watch?v=H8VbKdRS-hg>** |
|  | Anatomy and study of CN I-XII, I: temporal lobe epilepsy; II: visual field defect, papilledema; III-IV-VI: visual disturbances, diplopia, anisocoria, pupillary reflex pathways, cortical blindness. Symptoms and syndromes of damage to the cerebellopontine angle |  | CBL | Cranial nerves: anatomical and physiological data, clinical methods of research and symptoms of the lesion.I pair - olfactory nerve and olfactory system; symptoms and syndromes of injury.II pair - optic nerve and visual system, signs of damage to the visual system at different levels (retina, optic nerve, chiasm, optic tract, optic tubercle, optic radiation, cortex). Neuro-ophthalmological and paraclinical methods for studying the visual system (investigation of the fundus, visual evoked potentials).III, IV, VI pairs - oculomotor, trochlear, abducens nerves and oculomotor system; damage symptoms; medial longitudinal bundle and internuclear ophthalmoplegia; gaze regulation, cortical and stem gaze paresis; oculocephalic reflex; pupillary reflex and signs of its defeat; types and causes of anisocoria; Argyle Robertson syndrome, Adie's syndrome.Olfactory system: <https://www.youtube.com/watch?v=wQJbsOWc344&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXFl0&index=53> Functional anatomy of the optic nerve: <https://geekymedics.com/the-optic-nerve-cn-2/> Anatomy of the oculomotor muscles: <https://geekymedics.com/extraocular-muscles/> Vision research: <https://geekymedics.com/eye-examination-osce-guide/> Study of color perception: <https://geekymedics.com/colour-vision-assessment-osce-guide/> Fundus examination: <https://geekymedics.com/fundoscopy-ophthalmoscopy-osce-guide/> Visual pathway lesions and visual field loss: <https://geekymedics.com/visual-pathway-and-visual-field-defects/> Olfactory nerve examination: <https://www.youtube.com/watch?v=uF5KXrlSrjs> Optic nerve examination: <https://www.youtube.com/watch?v=VB94tYqsIJI> Examination of III, IV, VI pairs of cranial nerves: <https://www.youtube.com/watch?v=Drpn_E1wmLI> |
|  | Anatomy and study of CCN I-XII, V Neuralgia and neuropathy of the trigeminal nerve. |  | CBL | Cranial nerves: anatomical and physiological data, clinical methods of research and symptoms of the lesion. VII pair - the facial nerve, central and peripheral paresis of the facial muscles, the clinic of damage to the facial nerve at different levels. Taste and its disorders.VIII pair - vestibulocochlear nerve, auditory and vestibular systems; the role of the vestibular apparatus in the regulation of coordination of movements, balance and posture; signs of damage at different levels; nystagmus, vestibular vertigo, vestibular ataxia, Meniere's syndrome. Otoneurological methods for studying vestibular function.V pair - trigeminal nerve, syndromes of sensitivity disorders (peripheral, nuclear, stem and hemispheric); chewing disorders.Herpetic ganglionitis of the trigeminal ganglion. Odontogenic neuropathy, dental plexalgia; VII: central and peripheral paresis of the facial nerve, ageusia, innervation of the salivary glands, ganglionitis of the geniculate node (Hunt's syndrome); VIII: peripheral and central types of dizziness, tinnitus, Bell's Palsy. Rossolimo-Melkersson-Rosenthal disease. Sjögren's diseaseExamination of the VII pair of CN: <https://www.youtube.com/watch?v=M4kAQ6V6axs> Bell's Palsy: <https://www.youtube.com/watch?v=5KUbnVeMYEo&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXFl0&index=37> Functional anatomy of the vestibulocochlear nerve: <https://geekymedics.com/the-vestibulocochlear-nerve-cn-viii/> Examination of the VIII pair of CN: <https://geekymedics.com/the-head-impulse-nystagmus-test-of-skew-hints-examination/> Examination of the VIII pair of CN: <https://www.youtube.com/watch?v=AU_mZAPNFjQ>Examination of the V pair of CN: <https://www.youtube.com/watch?v=7_REH6ZycUk> |
|  | Caudal group of cranial nerves. Anatomy and research of cranial nerves I-XII. Syndromes of defeat of IX, X, XI, XII pairs of cranial nerves. IX-X: glossopharyngeal neuralgia, dysphagia, dysarthria; XI: torticollis; XII: central and peripheral lesions of the hypoglossal nerve. Bulbar and pseudobulbar signs. Torticollis. |  | CBL | Cranial nerves: anatomical and physiological data, clinical methods of research and symptoms of the lesion.IX and X pairs - glossopharyngeal and vagus nerves, autonomic functions of the vagus nerve; signs of damage at different levels, bulbar and pseudobulbar syndromes.XI pair - accessory nerve, signs of damage.XII pair - hypoglossal nerve, signs of damage; central and peripheral paresis of the tongue.Anatomy of the glossopharyngeal nerve: <https://geekymedics.com/the-glossopharyngeal-nerve-cn-ix/> Swallowing reflex: <https://www.youtube.com/watch?v=YQm5RCz9Pxc&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXFl0&index=34> Dysphagia: <https://www.youtube.com/watch?v=VoSMA2Anq3U> Examination of IX, X, XII pairs of cranial nerves: <https://www.youtube.com/watch?v=sMZbsci3BM4>Examination of XI pair of CN: <https://www.youtube.com/watch?v=K_QqV9HZJnQ>  |
|  | Myofascial pain syndrome (pain dysfunction syndrome of the temporomandibular joint). Stomalgia, glossalgia, psychalgia. |  | CBL | Myofascial pain syndrome (pain dysfunction syndrome of the temporomandibular joint). Classification of diseases of the temporomandibular joint. Methodology for the study of the temporomandibular joint. Additional research methods. Differential diagnosis of TMJ diseases. Treatment. |
|  | Progressive hemiatrophy and hemihypertrophy of the face. Focal scleroderma. Parry-Romberg syndrome |  | CBL |  |
|  | Meningeal signs. Study of CSF, meningitis, causes of changes in the cellular composition of CSF, interpretation of the presence of blood in the CSF. Infectious diseases of the nervous system: secondary purulent meningitis in purulent-inflammatory processes of the maxillofacial region. |  | CBL | Meningitis: classification, ethnology, clinic, diagnosis, treatment.Primary and secondary purulent meningitis: meningococcal, pneumococcal, caused by Haemophilus influenzae. Serous meningitis: tuberculous and viral meningitis. Meningeal syndrome: manifestations, diagnosis. Features of the course of purulent meningitis in newborns and young children. Encephalitis: classification, etiology, clinic, diagnosis, treatment.Herpetic encephalitis. Tick-borne encephalitis. Parainfectious encephalitis with measles, chickenpox, rubella. Rheumatic lesions of the nervous system, chorea minor.Poliomyelitis, features of the modern course of poliomyelitis. Brain abscess, spinal epidural abscess. Shingles (herpes). diphtheria polyneuropathy. Botulism. Neurosyphilis. Damage to the nervous system in AIDS.Parainfectious and post-vaccination lesions of the nervous system. Damage to the nervous system in intrauterine infections. post-vaccination encephalomyelitis. congenital neurosyphilis.Paraclinical methods in the diagnosis of infectious diseases of the nervous system: cerebrospinal fluid and serological studies, CT and MRI of the head. Features of pathogenetic treatment for meningitis, encephalitis, poliomyelitis.Interpretation of cerebrospinal fluid: <https://geekymedics.com/cerebrospinal-fluid-csf-interpretation/> Meningitis: <https://geekymedics.com/meningitis/> Meningitis: <https://www.youtube.com/watch?v=gIHUJs2eTHA> Brudzinsky sign: <https://www.youtube.com/watch?v=ke5EsXMXPHo> Kernig's sign: <https://www.youtube.com/watch?v=euNPB3OjrdM>  |
|  | ACVA. Classification of vascular diseases of the brain. |  | CBL | Classification of vascular diseases of the brain. Etiology of vascular diseases of the brain. Pathophysiology of cerebral circulation in occlusion of cerebral arteries and arterial hypertension. Primary symptoms FAST, BEFAST. Transient cerebrovascular accident (transient ischemic attack) and ischemic stroke: ethnology, pathogenesis, clinic, diagnostics. Cerebral hemorrhage: etiology, pathogenesis, clinic, diagnosis, therapy and indications for surgical treatment. Subarachnoid non-traumatic hemorrhage: etiology, pathogenesis, clinic. diagnostics. Providing emergency care for strokes at the prehospital stage. Higher brain (mental) functions: gnosis, praxis, speech, reading, writing, counting, memory, attention, intelligence and their disorders; aphasia (motor, sensory, amnestic, semantic); apraxia (constructive, spatial, ideomotor); agnosia (visual, auditory, olfactory); astereotnosis, anosognosia, autotopagnosia; dysmnestic syndrome, Korsakov's syndrome; dementia, oligophrenia. The value of neuropsychological research in the neurological clinic. Syndromes of damage to the frontal, parietal, temporal and occipital lobes of the brain, Anatomy of the cerebral cortex: <https://www.youtube.com/watch?v=2LzZMWGQe1k>Examination of higher brain functions: <https://www.youtube.com/watch?v=k0cph9PAFGQ> |
|  | Paroxysmal disorders of consciousness - epilepsy. |  |  | Classification of epilepsy and epileptic seizures. Etiology and pathogenesis of epilepsy and epileptic syndrome. Treatment of epilepsy. Status epilepticus: clinic, pathogenesis, treatment.Features of the course of epilepsy in children, neonatal convulsions, infantile spasms (West syndrome), Lennox-Gastaut syndrome, febrile convulsions, benign rolandic epilepsy; non-epileptic paroxysmal disorders in childhood (affective-respiratory attacks).Paraclinical methods in the diagnosis of paroxysmal disorders of consciousness - electroencephalography, CT and MRI of the head.Principles of prescribing antiepileptic drugs: classification, mechanism of action, pharmacokinetics, side effects, indications and contraindications. Antidepressants classification, mechanism of action, pharmacokinetics, side effects, indications and contraindications.Epilepsy: Types of seizures, Symptoms, Pathophysiology, Causes and Treatments: <https://www.youtube.com/watch?v=RxgZJA625QQ> Transient loss consciousness history taking: <https://geekymedics.com/transient-loss-consciousness-history-taking/> Explaining a diagnosis of epilepsy: <https://geekymedics.com/explaining-a-diagnosis-of-epilepsy/> GABA and Glutamate: <https://www.youtube.com/watch?v=wP9QD-5FL5U&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXFl0&index=22> GABA Receptors and GABA Drugs: <https://www.youtube.com/watch?v=MRr6Ov2Uyc4&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXFl0&index=23>  |
| 12 | Introduction to the clinical discipline "Psychiatry".General psychopathology. The main clinical and psychopathological symptoms and syndromes. |  | CBLWork in pairsRole-playing games | General and private psychiatry. Sections of psychiatry. Mental health criteria according to WHO. Classification and diagnosis of mental disorders. Methods of examination in psychiatry. Psychiatric conversation. Subjective and objective history in psychiatry. The role of catamnesis.General psychopathology. Positive and negative symptom complexes. Specific symptom complexes of psychotic and non-psychotic disorders in the age aspect. General provisions of the semiotics of mental disorders. The main stages of ontogenesis and the formation of the oral cavity. Clinical aspects of eruption of temporary and permanent teeth. Providing psychological assistance to persons with systemic malformations and malformations of individual anatomical formations of the maxillofacial region at the dentist's office.Rules for collecting anamnestic information, their analysis. Pathology of sensory cognition (pathology of sensations and perception). Pathology of thinking. Disorders of emotions and volitional processes. Disorders of memory, attention and intelligence. Disorders of the motor-volitional function. Disorders of consciousness. Isolation of impaired mental functions and their systematics, differential diagnostic criteria. The main clinical and psychopathological symptoms and syndromes in the age aspect and in the practice of a dentist.  |
| 13 | The main groups of mental disorders and diseases.endogenous psychoses.Schizophrenia.bipolar affective disorder.  |  | CBLWork in pairsRole-playing games | Schizophrenia. General diagnostic criteria. Types of the course of schizophrenia. Schizophrenic symptoms of the first and second rank according to K. Schneider. Diagnostic criteria for paranoid, hebephrenic, catatonic and undifferentiated schizophrenia. Chronic delusional disorders. Paranoia. late schizophrenia. Other delusional disorders are involutional paranoid. The social aspect of the disease. Schizophrenia. Child type.Mood disorders. Etiology. Epidemiology. Classification of individual episodes and the nature of relapses. Episodes of BAD. Bipolar affective disorder. manic episode. depressive disorder.The main stages of suicidal behavior (pre-suicidal, implementation of suicidal actions, post-suicidal). Verbal and non-verbal suicidal messages of patients. Self-harm without suicidal intent. Types of self-mutilation.Criteria for assessing the risk of suicide (Suicide Risk Assessment). Beck scales. Complications of mood disorders - social functioning disorder, severe anxiety disorder, alcohol and substance use disorder.Features of the provision of dental care to persons with mental disorders and diseases. Drug interactions of neuroleptics (with maintenance therapy of schizophrenia and drugs for the prevention of extrapyramidal disorders) with drugs for pain relief in the provision of dental care.   |
| 14 | The main groups of mental disorders and diseases.Neurotic, stress-related and somatoform disorders.  |  | CBLWork "at the patient's bedside"Role-playing games |  Fear-based anxiety disorders (phobias). Social and specific (isolated phobias). Anxiety disorders associated with obsessions and compulsions (obsessive-compulsive disorder); conditions arising after trauma and excessive stress - post-traumatic stress disorder (PTSD); disorders characterized by dissociation (endogenous psychoses). Fear of visiting the dentist. Obsessive states (definition, varieties, diagnostic value. Distinguishing obsessions from delusions. Hypochondriacal syndrome. Structure, dynamics, diagnostic value. Diagnosis of hypochondriacal and senestopathic disorders. Mental disorders with a predominance of somatic symptoms and related conditions - eating and eating disorders, regimen disorders "sleep-wakefulness", sexual disorders.A symptom of an increased gag reflex as an anamnestic feature of a dental patient. Etiological factors of the gag reflex - increased anxiety (vomiting as a vegetative reaction of the manifestation of fear to future disturbing or psychologically uncomfortable events); psychogenic reactive vomiting due to the occurrence of unpleasant associations (gustatory, olfactory, etc.); neurotic vomiting (as a vegetative reaction to the suppression of emotions that cause anxiety or psychological discomfort, or as a vegetative reaction of the patient's personality, prone to hysteroid types of response to stressful or conflict situations); psychotic vomiting against the background of the manifestation of other psychotic manifestations (reactive and(dissociative amnesia).Basic concepts of a differentiated approach to the psychotherapy of borderline mental disorders.  |
| 24 | The main groups of mental disorders and diseases.Emotional and behavioral disorders that usually begin in childhood and adolescence. Disorders of psychological (mental) development. |  | CBLWork "at the patient's bedside"Role-playing games | Age criteria for predominant neuropsychic response in children and adolescents. "Age-specific" symptoms and syndromes in child psychiatry. Crisis periods of child development and their influence on the occurrence of signs of mental dysontogenesis. Age criteria for a predominant neuropsychic response in children and adolescents Emotional and behavioral disorders that usually begin in childhood and adolescence.Behavioral disorders. Emotional disorders, the onset of which is specific to childhood.hyperkinetic disorders. Autism. Issues of differential diagnosis of autism and autistic-like syndromes in other mental disorders. Tics (transient tics, chronic motor tics or vocalisms, Gilles de la Tourette syndrome). Other behavioral and emotional disorders beginning in childhood and adolescence. Features of dental status in children with mental disorders. Dental care for autism. The prevalence of oral diseases in autism. Features of communication with this category of children and adults when visiting a dentist. Oral hygiene in autism.  |
| 15 | The main groups of mental disorders and diseases.Epilepsy. Mental retardation. dementia. |  | CBLWork "at the patient's bedside"Role-playing games | Epilepsy - main clinical manifestations, classification of seizures. Paroxysmal phenomena (seizures epileptic, hysterical, diencephalic, status epilepticus, special states of consciousness). Their diagnostic value. Drug interactions of anticonvulsants and painkillers in the provision of dental care. Contraindications for the use of drugs containing adrenaline - the risk of developing an epileptic seizure.Mental retardation. Dementia. Clinical Syndrome. Basic care and practice. Features of the behavior of patients and the provision of care to patients with mental retardation and dementia at the dentist's office. Basic care and practice (WHO mhGAP). |
| 16 | Narcological semiotics and phenomenology of addictive (narcological) disorders.  |  | CBLWork "at the patient's bedside"Role-playing games | Classification of psychoactive substances. Objective signs of drug and alcohol intoxication. Mental and physical dependence, symptoms of altered reactivity, withdrawal syndrome. Basic concepts of hashishism, opium addiction, alcoholism. New synthetic drugs with a narcotic effect. Dental status of the patient - the user of surfactants. The aggravating effect of drugs and alcohol during anesthesia during surgical interventions. A patient with withdrawal syndrome and in a state of intoxication at a dentist's appointment - the main clinical signs. The process of bone tissue regeneration (osteogenesis) in drug addicts. Risk of necrosis during surgery. Indications and contraindications for implants. Recommendations for prosthetics with removable structures with soft pads, thin-walled crowns, etc., which minimize the risk of oral mucosa. Algorithm of measures to improve the effectiveness of dental rehabilitation of users of surfactants. |

**Tasks for ISW, Schedule for their implementation, Methodological instructions for them**

**Independent work of the student with the teacher: 20 hours**

● work in small groups during study hours

● development of practical skills in the Simulation Center according to scenarios

● participation in SSS of the department, speeches at conferences

● supervision of a neurological patient with writing a medical history

**Extracurricular independent work of the student: 20 hours**

* study of special medical literature
* work with electronic information resources, including medical Internet portals
* preparation of clinical reviews
* Night duty

**360° assessment checklist for student**

**CURATOR and Lecturer**

       FULL NAME of Curator \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Very well** | **Criteria and points** | **Unsatisfactory** |
| **1** | **Constantly preparing for classes:**For example, backs up statements with relevant references, makes short summariesDemonstrates effective teaching skills, assists in teaching others | **Preparing for classes****10 8 6 4 2 0** | **Constantly not preparing for class**For example, insufficient reading and study of problematic issues, makes little contribution to the knowledge of the group, does not analyze, does not summarize the material. |
| **2** | **Takes responsibility for their own learning:**For example, manages their learning plan, actively tries to improve, critically evaluates information resources  | **A responsibility****10 8 6 4 2 0** | **Takes no responsibility for their own learning:**For example, depends on others to complete the learning plan, hides mistakes, rarely critically analyzes resources. |
| **3** | **Actively participates in the training of the group:**For example, actively participates in discussions, willingly takes tasks | **Participation****10 8 6 4 2 0** |  **Not active in the group training process:**For example, does not participate in the discussion process, is reluctant to accept assignments |
| **4** | **Demonstrates effective group skills**For example, takes the initiative, shows respect and correctness towards others, helps to resolve misunderstandings and conflicts. | **Group skills****10 8 6 4 2 0** | **Demonstrates ineffective group skills**For example, inappropriately intervening, showing poor discussion skills by interrupting, avoiding or ignoring others, dominating or impatient |
| **5** | **Skilled in communicating with peers:**For example, actively listening, receptive to non-verbal and emotional cuesRespectful attitude | **Communications****10 8 6 4 2 0** | **Difficulty communicating with peers**For example, poor listening skills, unable or disinclined to listen to non-verbal or emotional cuesUse of obscene language |
| **6** | **Highly developed professional skills:**Eager to complete tasks, seek opportunities for more learning, confident and skilledCompliance with ethics and deontology in relation to patients and medical staffObservance of subordination. | **Professionalism****10 8 6 4 2 0** | **Clumsy, fearful, refusing to try even basic procedures**Inferiority in professional behavior - causing harm to the patient, rude disrespectful attitude towards medical staff, colleagues |
| **7** | **High introspection:**For example, recognizes the limitations of their knowledge or abilities without becoming defensive or rebuking others.    | **Reflection****10 8 6 4 2 0** | **Low introspection:**For example, needs more awareness of the limits of understanding or ability and does not take positive steps to correct      |
| **8** | **Highly developed critical thinking:**For example, appropriately demonstrates skill in performing key tasks such as generating hypotheses, applying knowledge to case studies, critically evaluating information, drawing conclusions aloud, explaining the process of thinking | **Critical thinking****10 8 6 4 2 0** | **Critical Thinking Deficiency:**For example, has difficulty completing key tasks. As a rule, does not generate hypotheses, does not apply knowledge in practice either because of their lack or because of inability (lack of induction), does not know how to critically evaluate information |
| **9** | Fully adheres to the rules of academic conduct with understanding, suggests improvements in order to increase efficiency.Complies with the ethics of communication - both oral and written (in chats and appeals) | **Compliance with the rules of academic conduct****10 8 6 4 2 0** | Пренебрегает правилами, мешает другим членам коллективаNeglects the rules, interferes with other members of the team |
| **10** | Fully follows the rules with full understanding of them, encourages other members of the group to adhere to the rulesStrictly adheres to the principles of medical ethics and PRIMUM NON NOCERE | **Compliance with the rules of conduct in the hospital****10 8 6 4 2 0** | Breaks the rules.Encourages and provokes other members of the group to break the rulesCreates a threat to the patient |
|  | Maximum | **100 points** |  |

\* gross violation of professional behavior, rules of conduct in the hospital - or a decrease in the grade for boundary control or cancellation; ethical committee

Such violations are a threat to the health of patients due to action (for example, smoking on the territory of the hospital) or inaction; rudeness and rudeness towards any person (patient, classmate, colleague, teacher, doctor, medical staff)

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **№** | **Criteria** | **10** | **8** | **6** | **4** | **2** |
| ***Excellent*** | ***Good*** | ***Satisfactory*** | ***Need correction*** | ***Bad*** |
| 1 | Patient complaints: major and minor | Completely and systematically, with an understanding of important details | Accurate and complete | basic information | Incomplete or inaccurate, some details are missing | Misses important |
| 2 | Collecting an anamnesis of the disease |
| 3 | Anamnesis of life |
| 4 | Objective status - general examination | Completely and systematically, with an understanding of important details | Consistently and correctly | Identification of main data | Incomplete or not quite correct, not attentive to patient comfort | Inappropriate data |
| 5 | **Nervous system** |  | Complete, effective, technically correct application of all examination skills, physical examination with minor errors, or corrected during execution | Revealed basic dataPhysical examination skills learned | Incomplete or InaccuratePhysical examination skills need to be improved | Important data are missing.Inappropriate physical examination skills |
| 6 | Medical history presentation | Maximum full description and presentationUnderstands the problem in a complex, connects with the patient’s features | precise, focused; choice of facts shows understanding | Record is by form, includes all basic information; | Many important omissions, inaccurate or unimportant facts are often included | Lack of control of the situation, many important omissions, many clarifying questions |
|  |  |  |  |  |  |  |

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **10** | **8** | **4** | **2** |
| **1** | **Problem solving** | The organized concentrated, allocates all questions which are falling into to the main revealed problem with a comprehension of a concrete clinical situation | Organized, the concentrated, allocates all questions which are falling into to the main revealed problem, but there is no comprehension of a concrete clinical situation | Not the concentrated, Derivation on the questions which are not falling into to the main revealed problem | Inaccurate, misses the main thing, disharmonious data. |
| **2** | **Information** | All necessary information on a subject in the free, serial, logical manner is completely conveyed The product form is adequately chosen | All necessary information in a logical manner, but with shallow inaccuracies is conveyed | All necessary information on a subject is explained chaotically, with not gross errors | Important information on a subject, gross errors is not reflected |
| **3** | **Significance** | Material is chosen on the basis of authentically established facts.  Manifestation of a comprehension on the level or quality of proofs | Some conclusions and the conclusions are formulated on the basis of assumptions or the incorrect facts. There is no complete comprehension of level or quality of proofs | Not the sufficient comprehension of a problem, some conclusions and the conclusions are based on the inexact and not proved data – doubtful resources are used | Conclusions and the conclusions are not proved or irregular |
| **4** | **Logic** | logical and well reasoning, has internal unity, provisions in a product follow one of another and are logically interdependent between themselves | Has internal unity, provisions of a product one of another follows, but there are inaccuracies | There is no sequence and logicality in statement, but it is possible to keep track of the main idea | Jumps from one on another, it is difficult to catch the main idea |
| **5** | **Recourses** | Literary data are submitted in logical interrelation, show deep study of the main and padding informational resources | Literary data show study of the main literature | Only ordinary recourses | Inconsistency and randomness in statement of data, an inconsistencyThere is no knowledge of the main textbookUsing of Google |
| **6** | **Practical application** | High | Good | moderate | no |
| **7** | **Patient focusing** | High | Good | moderate | no |
| **8** | **Applicability in future practice** | High | Good | moderate | no |
| **9** | **Presenation** | Correctly, to the place all opportunities of Power Point or other e-softs, the free possession of material, a sure manner of statement are used | It is overloaded or are insufficiently used visual materials, inexact possession of material | Visual materials are not informative  | Does not own material, is not able to explain it |
| **bonus** | **Time management**\* | 10For before deadline | In time | Good quality but a little late Minus 2-4  | After deadline more than 24 hours Minus 10  |
| **bonus** | **Rating**\*\* | 10  points additional | Outstanding work, for example: The best work in groupCreative approachInnovative approach to realization of a taskAccording to the proposal of group |
|  | \* The deadline is determined by the teacher, as a rule - the day of the boundary control\*\* thus, you can get 90 points as much as possible, to get above 90-you need to show a result higher than expected |

**Map of educational and methodological provision of the discipline**

 **" Neurology and mental health "**

|  |  |  |  |
| --- | --- | --- | --- |
| **№** | **Informational resources** | **Number of students studying the discipline (estimated enrollment)** | **Number in the library KazNU** |
| **kaz** | **russ** | **eng** |
|  | **Textbooks (title, year of publication, authors) in electronic version** | 16 |  |  |  |
|  | **Literature**: 1. Триумфов А.В. «Топическая диагностика заболеваний нервной системы», краткое руководство. Издательство «МЕДпресс-информ» (2015).
2. Топический диагноз в нервологии по Петеру Дуусу: учебник/ П. Дуус; под ред. М. Бера, М. Фротшера. – 3-е изд.
3. Bähr, M., & Frotscher, M. (2019). Duus’ topical diagnosis in neurology: Anatomy, physiology, signs, symptoms.
4. Ropper, A. H., Samuels, M. A., & Klein, J. (2014). Adams and Victor’s principles of neurology.
5. In Daroff, R. B., In Jankovic, J., In Mazziotta, J. C., In Pomeroy, S. L., & Bradley, W. G. (2016). Bradley's neurology in clinical practice.
6. In Innes, J. A., In Dover, A. R., In Fairhurst, K., Britton, R., & Danielson, E. (2018). Macleod's clinical examination.
7. Philip B Gorelick, Fernando B Testai, Graeme J Hankey, Joanna M Wardlaw (2014). Hankey’s clinical neurology.
8. Hal Blumenfeld (2010) Neuroanatomy through clinical cases
9. «Неврологиялық науқастарды клиникалық зерттеу әдістемесі» Методические рекомендации / С.У.Каменова и др. – Алматы, 2018.- 84с.
10. Kamenova S.U., Kuzhubaeva K.K., Ospanbekova D.M. Methods of clinical examination of neurological patients / Methodical recommendations / S.U. Kamenova et al. – Almaty, 2018. – 82 pages.
11. Uddin S., Rashid M. (eds.) Advances in Neuropharmacology-Drugs and Therapeutics. New York: Apple Academic Press, 2019. — 654 p.
12. Hadi Manji, Seán Connolly, Neil Dorward, Neil Kitchen, Amrish Mehta, Adrian Wills (2007). Oxford handbook of neurology.
13. Nicholas J Talley, Brad Frankum, Davis Currow (2015). Essentials of internal medicine.
14. Paul W. Brazis, Joseph C. Masdeu, José Biller (2011). Localization in clinical neurology.
15. Каменова С.У., Кужыбаева К.К., Оспанбекова Д.М. Методика клинического обследования неврологических больных: Учебное пособие / С.У.Каменова и др. – Алматы, 2018.- 84с.
16. Клинические протоколы МЗ РК
17. Электронный учебник. Психиатрия и Наркология. Первый Санкт-Петербургский государственный медицинский университет им. Акад. И.П.Павлова <http://www.s-psy.ru/obucenie/kurs-psihiatrii/5-kurs-lecebnyj-fakultet/elektronnyj-ucebnik-po-psihiatrii>.
18. Иванец Н. Н., Психиатрия и наркология [Электронный ресурс] : учебник / Иванец Н.Н., Тюльпин Ю.Г, Чирко В.В., Кинкулькина М.А. - М. : ГЭОТАР-Медиа, 2012. - 832 с. - ISBN 978-5-9704-1167-4 - Режим доступа: <http://www.studmedlib.ru/book/ISBN9785970411674.html>
19. Садуакасова К.З. Детская психиатрия. Учебник. Алматы. 2019-346с.
20. Иванов С.В. Психофармакотерапия психосоматических расстройств //Российское общество психиатров [http://psychiatr.ru/]. URL:

<http://psychiatr.ru/download/965?view=1&name>1. <https://obuchalka.org/20200403119843/klinicheskoe-primenenie-sovremennih-antidepressantov-mosolov-s-n-1995.html>
2. <https://obuchalka.org/20200923125294/psihiatriya-nacionalnoe-rukovodstvo-aleksandrovskii-u-a-neznanov-n-g.html>
3. Садуакасова К.З, Енсебаева Л.З.. Жалпы психопатология.- Оқу құралық Алматы. «Казақ университеті» 2022.-78б.
4. Об утверждении стандарта организации оказания медико-социальной помощи в области психического здоровья населению Республики Казахстан

Приказ Министра здравоохранения Республики Казахстан от 30 ноября 2020 года № ҚР ДСМ-224/2020. Зарегистрирован в Министерстве юстиции Республики Казахстан 2 декабря 2020 года № 217121. Edmund S. Higgins, Mark S. George. Illustrations by Edmund S. Higgins. «The Neuroscience of Clinical Psychiatry. The Pathophysiology of Behavior and Mental Illness».

**26.** Allan Tasman Professor and Chair, Jerald Kay Professor and Chair, Robert J. Ursano Professor and Chair. «The Psychiatric Interview. Evaluation and Diagnosis».3. Fadem Barbara. Behavioral Science. Seventh Edition1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders, 5th ed. Arlington: American Psychiatric Association, 2013.
 |  |  |  |  |
|  | **Internet-resources:**1. Medscape
2. Up to Date
3. <https://www.cdc.gov/>
4. https://www.who.int/
5. https://geekymedics.com
6. ncbi.nlm.nih.gov/PubMed/
7. Access Medicine
8. <https://www.unicef.org/kazakhstan/>
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**LEVEL OF DEVELOPMENT–**

|  |
| --- |
| **Neurology** |
|  | Competence | level |
| Know and apply :  | anatomy, histology, physiology of the nervous system in normal and pathological conditions; higher mental functions, age characteristics | II |
| The mechanism of development of the main syndromes in neurology and the principles of their detection: sensory disturbance, motor disorders, hyperkinesis, akinetocorigid syndrome, cerebellar ataxia, damage to the spinal cord, brain stem, cranial nerves, damage to the hypothalamic-pituitary system, autonomic disorders; brain injury syndromes. | II |
| Physiology of wakefulness and sleep, sleep disorders | II |
| Classification, mechanism of action, pharmacokinetics, side effects, indications and contraindications for the use of drugs used in neurological pathology: antipsychotics, tranquilizers, anticonvulsants, sedatives and neurostimulants, muscle relaxants that improve cerebral circulation and metabolism used to relieve pain. | II |
| Edema/swelling of the brain. Edema options. Principles of treatment. Violation of intracranial pressure. Displacement and herniation of brain tissue | II |
| Disturbances of consciousness. Classification of levels of impaired consciousness. Coma of various etiologies (organic, metabolic). Coma outcomes. Coma in somatic pathology: primary cerebral, with endocrine diseases, toxic, with gas exchange disorders, associated with loss of electrolytes, water | II |
| Be able to : | Pain as a psychophysiological state. Headache. The main types of headaches (migraine associated with structural damage, associated with vascular disorders, cranial neuralgia, etc.) | II |
| Identify neurological manifestations in chronic and acute cerebrovascular accident | I |
| Detect speech disorders | I |
| Detect meningeal syndrome | I |
| Diagnose and treat (III-IV) or suggest (I-II)Diagnose and treat (III-IV) or suggest (I-II) | Interpret the data of imaging methods (echoencephalography, Doppler ultrasound, X-ray, angiography, CT, MRI, PET) in the pathology of the nervous system, know the indications and rules for conducting and the diagnostic value of such studies | I |
| Conduct differential diagnosis of syncope | II |
| Conduct differential diagnosis for neurogenic respiratory disorders | II |
| Detect intellectual disability (mental retardation, dementia) | II |
| Dyscirculatory encephalopathy | I |
| Transient disorders of cerebral circulation | II |
| herpes zoster | II  |
| Purulent, serous meningitis | I |
| Polyneuropathy in somatic diseases | I |
| Peripheral autonomic failure in somatic pathology | I |
| Stroke | II |
| subarachnoid hemorrhage | I |
| Bruising and concussion | I |

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| --- |
| **Psychiatry** |
|  |  Competence | уровень |
| Know and apply : | The current International Classification of Mental and Behavioral Disorders at the time of training. | I |
| Types of provision of specialized psychiatric care to the population. Rules for hospitalization in a psychiatric hospital. | I |
| The main current regulatory legal acts in the provision of psychiatric care to the population. | I |
| Basic principles of communication of patients with mental disorders and diseases in the provision of dental care. Working with families of patients in need of dental care. | II |
| Antipsychotic drugs. Mechanism of action and side effects of antipsychotic drugs. Rules for conducting psychopharmacotherapy. supportive therapy. Interdrug interaction. | II |
| Principles of psychopharmacotherapy in children and adolescents. | II |
| Risk factors for suicidal behavior and methodology for the prevention of suicide among the population. | II |
| The main patterns of pathological behavior in dependence on PAS. Psychoprophylaxis of addictive behavior. Determination of traces of surfactants in biological body fluids. | II |
| Be able to: | Conduct a psychiatric interview and collect the patient's subjective history. Describe the somatic, neurological and mental status of the patient. Give a general description of the patient's dental status. | III |
| Identify the symptoms and syndromes of a mental disorder and evaluate them clinically. Determine the preliminary diagnosis. | III |
| Conduct an analysis and give a preliminary conclusion about impaired mental functions when interpreting the conclusion of a psychological experimental study (PEI), questionnaires/questionnaires, self-description. | III  |
| Determine the degree of intoxication and describe the mental status depending on the degree of intoxication. | III |
| To isolate the leading clinical and psychopathological complex and the nosological affiliation of acute psychotic disorder, to determine the algorithm for providing assistance in the relevant diagnostic and treatment CPs. | III |
| Detect abuse of non-addictive substances. | II |
| Diagnose the degree of depressive disorder using the Back Scales. | III |
| Diagnose the severity of dementia using the "Test of hours" | III |
| Diagnose and treat (III-IV) or suggest (I-II) | Endogenous psychoses | II |
| Malignant neuroleptic syndrome | III |
| affective disorders. Bipolar affective disorder. depressive disorder. | III |
| Neurotic, stress-related and somatoform disorders (phobic and anxiety disorders, social phobias, generalized anxiety disorder). | III |
| Obsessive Compulsive Disorders | III |
| Post Traumatic Stress Disorder | III |
| Mental disorders due to the use of psychoactive substances (acute intoxication, intoxication psychosis, withdrawal syndrome) | II |
| Mental and behavioral disorders associated with the postpartum period | III |
| Dementia. | II |
| Syndromes of clouded consciousness - delirium, oneiroid, twilight clouding of consciousness, amentia | III |
| Eating disorders. Anorexia nervosa. | III |
| Oppositional defiant disorder of childhood | II |
| Children's autism. atypical autism. | II |
| Substance use disorders in children and adults (WHO mhGAP) | II |
| Depressive disorders in adolescents and adults (WHO mhGAP) | III |
| Self-harm in children, adolescents and adults. Management of patients at risk for self-harm and suicide (WHO mhGAP) | III |