

SYLLABUS

Жүйке жүйесінің патологиясы

Патология нервной системы

Pathology of the nervous system

1.	General information about the discipline		
1.1	Faculty/School: Graduate School of Medicine	1.6	Credits (ECTS): 6
1.2	Educational program (EP): 6B10114 Medicine	1.7	<u>Prerequisites:</u> Pathology of organ's and system-1 <u>Postrequisites:</u> Special disciplines
1.3	Agency and year of accreditation of the EP	1.8	SIW/SPM/SRD (qty): 60 hours
1.4	Name of discipline: Жүйке жүйесінің патологиясы Патология нервной системы Pathology of the nervous system	1.9	SRSP/SRMP/SRDP (number): 30 hours
1.5	Discipline ID: 103327 Discipline code: PNS 3312	1.10	<i>Required - yes</i>
2.	Description of the discipline		
	Immunopathogenesis, pathomorphology, clinical presentation of problems (clinical syndromes) and clinically oriented pharmacology of nervous system pathology. The main syndromes: headache, dizziness, tremor, hyperkinesia, memory impairment, the presence of cerebral, meningeal symptoms, pathological reflexes, tension symptoms, epileptic seizures, migraine attack, myasthenic crisis. Focal lesions. Reasonable syndromic diagnosis and principles of treatment, taking into account the age of the patient.		
3	Purpose of the discipline		
	- Study of pathogenesis, pathomorphology, clinical presentation of problems (clinical syndromes) and clinically oriented pharmacology of nervous system pathology. - Development of clinical argumentation, analytical and problem-oriented thinking, deep understanding of the problem in the clinical context; - Formation and development of skills in clinical diagnosis of pathology and reasonable formation of syndromic diagnosis.		

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4. Learning outcomes (LO) by discipline (3-5)			
	LO disciplines		LO according to the educational program, with which the LO is associated by discipline (LO No. from the EP passport)
1	Apply knowledge of the pathogenesis of nervous system pathology for targeted questioning and patient physical examination, taking into account age characteristics and determining diagnostic and therapeutic interventions related to common diseases of nervous system	3	Identify and solve problems affecting human health by applying knowledge of underlying pathological processes and biological damage they cause
2	Interpret the basic data a special neurological and laboratory and instrumental examination in the pathology of the nervous system.	3	Identify and interpret clinical symptoms and syndromes, collect information from patients and other sources of clinical significance, laboratory and instrumental data for studying patients with age-related diseases for disease management, including the initiation of appropriate interventions.
3	Integrate knowledge to identify the main syndromes of the nervous system: headache, dizziness, tremor, hyperkinesia, back pain, memory impairment, cerebral, meningeal symptoms, pathological reflexes, tension symptoms, epileptic seizures, migraine attack, myasthenic crisis.	3	Integrate clinical skills and knowledge to provide individualized approach in the treatment of a specific patient, and the strengthening of health in accordance with its needs; make professional decisions based on the analysis of the rationality of diagnosis and applying the principles of evidence-based and personalized medicine.
4	To identify the main focal symptoms and syndromes: impaired sensitivity, level of lesion of the motor sphere, types of hyperkinesia, akinetiko-rigid syndrome, types of ataxia, damage to the spinal cord, brain stem, cranial nerves, disorders of the autonomic nervous system; syndromes of the defeat of the cerebral cortex.	3	Apply knowledge of the basic principles of human behavior for effective communication and therapeutic and diagnostic process in compliance with the principles of ethics and deontology; apply knowledge of the psychology of the patient, taking into account cultural characteristics and race
5	Interpret the neuro-psychological and emotional development of children and adolescents in the age aspect	3	Work effectively in an interprofessional/multidisciplinary team with other healthcare professionals in organizing and managing the diagnostic and treatment process; collect and communicate medical information orally and in writing to provide safe and effective patient care

6	To diagnose and know the principles of treatment of acute disorders of cerebral circulation, meningeal and cerebral syndrome (meningitis and encephalitis), coma, extrapyramidal disorders, seizures, pain syndrome, comas	3	Provide effective and timely medical care, based on the principles of evidence-based medicine and humanity, applying legal norms, for diseases in patients of all age groups, paying attention to its quality and safety.
7	Know the classification, mechanism of action, pharmacokinetics, side effects, indications and contraindications to the use of drugs that affect the nervous system and are used in the treatment of diseases of the nervous system.	3	To provide timely and effective medical care in emergency and life-threatening conditions, including emergency situations, natural and man-made disasters, and pandemics on the principles of humanity, safety and efficiency.
8	Describe the social, economic, ethnic and racial factors that play a role in the development, diagnosis and treatment of neurological diseases.	3	To apply knowledge of the rights, duties and ways of protecting the rights of the physician and the patient, including the child as a patient, in their professional activities; apply medical knowledge, clinical skills and professional attitude to the patient regardless of his age, culture, faith, traditions, nationality, lifestyle.
9	Demonstrate effective skills during the interview and examination of the neuropsychological status of patients.	3	Analyze and maintain the necessary documentation and organization of documents in health care organizations; the use of modern information and digital technology, and health information systems for professional applications
10	Demonstrate a commitment to professional values, such as altruism, compassion, empathy, responsibility, honesty and respect for the principles of confidentiality	3	Apply knowledge of the principles and methods of formation a healthy human and family life, population health; apply knowledge of a set factors that determine health and disease for the purpose of prevention
11		3	Demonstrate commitment to the highest standards of professional responsibility and honesty; observe ethical principles in all professional interactions with patients, families, colleagues and society as a whole, regardless of ethnic characteristics, culture, gender, economic status or sexual orientation.
5.	Summative assessment methods (mark (yes – no) / specify your own):		
5.1	MCQ testing for understanding and application	5.5	Scientific project SSRW (student's scientific research work)
5.2	Practical skills – Miniclinical exam (MiniCex)	5.6	360 score - behavior and professionalism
5.3	3. SIW- creative task	5.7	Midterm control: Stage 1 - MCQ testing for understanding and application Stage 2 – passing practical skills (miniclinical exam (MiniCex))
5.4	Medical history	5.8	Exam: Stage 1 - Testing on MCQ for understanding and application

			Stage 2 - OSCE with NP
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6.	Detailed information about the discipline				
6.1	Academic year: 2023-2024		6.3	Timetable (сабақ күні, уақыт): From 8.00 to 14.00	
6.2	Semester: 6 semester		6.4	Place (educational building, office, platform and link to the DOT learning meeting): City Clinical Hospital №1, City Clinical Hospital №7	
7.	Discipline leader				
Position		Full name	Department	Contact information (tel., e-mail)	Consultations before exams
Senior lecturer		Tankayva SH Serikbayeva D	Clinical discipline	8 (747) 406 02 57 8 (775) 756-24-24	Before the examination session within 60 minutes
8.	The content of the discipline				
	Name of the discipline			Quantity of hours	Conducting form
1.	Anatomical and functional structure of the central nervous system with the basics of neuroimaging. Assessment of neurological status.			6	Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
2.	Sensitivity and its disorders			6	Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
3.	Voluntary movement. Central and peripheral components of the motor system and their disorders.			6	Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
4.	Lesions of the spinal roots, plexuses and nerves. Autonomic nervous system. Autonomic innervation and functional disorders of organs. Autonomic nervous system assessment methods			6	Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
5.	Cerebellum and extrapyramidal system				Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction

			Mini-conference on the SIW topic
6.	Brain stem and cranial nerves. Cranial nerves I, II, III, IV, V, VI. Trigeminal neuralgia		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
7.	Cranial nerves VII, VIII, IX X, XI, XII . Facial neuropathy		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
Midterm control 1		Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 40% 2-stage – mini clinical exam (MiniCex) - 60%	
8.	General cerebral syndrome - (ICP disorders) and meningeal syndrome. Impaired consciousness - patient in coma		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
9.	Seizures		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
10.	Damage to the cerebral hemispheres and disorders of higher cortical functions.		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
11.	1. Introduction to medical psychology. Principles of constructing clinical-psychopathological and pathopsychological research.		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
12.	Clinical examination of patients. Sensations and perception. Memory. Attention.		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
13.	Clinical examination of patients.		Formative Assessment:

	Thinking and intelligence. Consciousness.		Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
14.	Emotional-volitional sphere. Motor-volitional sphere. Personality.		Formative Assessment: Use of active learning methods: TBL, CBL Patient interaction Mini-conference on the SIW topic
15.	Sleep disorders		
Midterm control 2		Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 40% 2-stage – mini clinical exam (MiniCex) - 60%	
Final control (Exam)		Summative evaluation: 2 stages: 1-stage – MCQ testing for understanding and application - 40% 2- stage – OSCE with NP - 60%	
Total			100
9.	Methods of teaching in the discipline (briefly describe the approaches to teaching and learning that will be used in teaching) Using active learning methods: TBL, CBL		
1	Methods of formative assessment: TBL – Team Based Learning CBL – Case Based Learning		
2	Summative assessment methods (from point 5): 1. MCQ testing for understanding and application 2. Passing practical skills - miniclinical exam (MiniCex) 3. SIW - creative task 4. Medical history 5. Scientific project SSRW (student's scientific research work) 6. 360 score - behavior and professionalism		
10.	Summative assessment		
№	Forms of control	General % from total %	
1	Patient history defence	30% (estimated by the checklist)	
5	Border control	70%	

		(1-stage – MCQ testing for understanding and application - 40%; 2- stage – mini clinical exam (MiniCex) - 60%)	
Border control 1		30% +70% = 100%	
1	Patient history defence	20% (estimated by the checklist)	
2	360 score - behavior and professionalism	10% (estimated by the checklist)	
3	Scientific project SSRW (student’s scientific research work)	10%	
5	Border control	60% (1-stage – MCQ testing for understanding and application - 40%; 2- stage – mini clinical exam (MiniCex) - 60%)	
Border control 2		20+10+10 + 60 = 100%	
9	Exam	2 stages: 1st stage - testing on MCQ for understanding and application - 40% 2nd stage - OSCE with NP - 60%	
10	Final score:	ORD 60% + Exam 40%	
10.	Score		
Rating by letter system	Digital equivalent	Points (% content)	Assessment Description (changes should be made only at the level of the decision of the Academic Committee on the quality of the faculty)
A	4,0	95-100	Excellent. Exceeds the highest job standards.
A-	3,67	90-94	Excellent. Meets the highest job standards.
B+	3,33	85-89	Good. Very good. Meets high job standards.
B	3,0	80-84	Good. Meets most of the job standards.
B-	2,67	75-79	Good. More than enough. Shows some reasonable ownership of the material.
C+	2,33	70-74	Good. Acceptable. Meets the basic standards of the task.
C	2,0	65-69	Satisfactory. Acceptable. Meets some basic job standards.
C-	1,67	60-64	Satisfactory. Acceptable. Meets some basic job standards.
D+	1,33	55-59	Satisfactory. Minimally acceptable.

D	1,0	50-54	Satisfactory. Minimally acceptable. The lowest level of knowledge and completion of the task.
FX	0,5	25-49	Unsatisfactory. Minimally acceptable.
F	0	0-24	Unsatisfactory. Very low productivity.

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

Literature	Main Available in the library		
	Author	Name of the book, publisher	Year of publication
	Изимова Роза.	Жоғары жүйке жүйесінің анатомиясы мен физиологиясы : оқу құралы	2021
	Кайшибаев, Смагул К.	Основы топической и синдромологической диагностики. Ч. 1	2018
	Кайшибаев, Смагул К.	Частная невропатология. Ч. 2	2018
	Петрухин, Андрей Сергеевич.	Детская неврология : учебник : в 2 т. Т. 2	2018
	Петрухин, Андрей Сергеевич	Детская неврология : учебник : в 2 т. Т. 1	2018
	А. С. Кадыкова	Практическая неврология	2016
	Төлеусаринов А. М.	Жалпы неврология : оқулық	2018
	Гусев, Евгений Иванович	. Неврология және нейрохирургия : екі томдық оқулық. 1-том	2016
	Гусев, Евгений Иванович	Неврология және нейрохирургия : екі томдық оқулық. 2-том	2016
	Гусев, Евгений Иванович.	Неврология и нейрохирургия : учебник в двух томах. Т. 1	2018
	Гусев, Евгений Иванович.	Неврология и нейрохирургия : учебник в двух томах. Т. 2	2018
	Гусев, Евгений Иванович.	Неврологические симптомы, синдромы и болезни : энциклопедический справочник	2014
	P. L. Robert et al	International Neurology	2016

	Dale Purves	NEUROSCIENCE, Sixth Edition	2011
	Aaron L. Berkowitz	Clinical_Neurology_and_Neuroanatomy_A_Localization_Based_Approach	2022
	Ropper	Adams And Victor's Principles Of Neurology	2019
	Бер М., Фротшер М., Левин О.С.	Топический диагноз в неврологии по Петеру Дуусу	2014
	Fuller	Neurological Examination Made Easy	2019
	Mark Mumenthaler	Fundamentals of Neurology	2006
	Mathias Baehr, Michael Frotscher	baehr_m_frotscher_m_duus_topical_diagnosis_in_neurology_anat	2012
	Swaiman	Swaiman's Pediatric Neurology Principles and Practice	2017
	Гудфеллоу Дж А	Обследование неврологического больного	2018
	Additional Available in the library		
	Автор	Наименование книги, издательство	Год издания
	E. Wolters, C. Baumann	Parkinson Disease and Other Movement Disorders : Motor Behavioural Disorders and Behavioural Motor Disorders /	2014
	Preston, David C.	Electromyography and Neuromuscular Disorders : Clinical-Electrophysiologic-Ultrasound Correlations	2021
	Абдрахманова М. Г.	Неврологиялық науқастарды оңалтудың заманауи принциптері : оқу-әдістемелік құрал	2019
	Гусев, Евгений Иванович.	Неврологические симптомы, синдромы и болезни : энциклопедический справочник	2014
	Гусев, Евгений Иванович.	Эпилепсия и ее лечение : монография	2016
	Киспаева Т. Т.	Неврология туралы дәрістер : оқу құралы	2021
	Л. Н. Неробкова, Г. Г. Авакян, Т. А. Воронина, Г. Н. Авакян	Клиническая электроэнцефалография. Фармакоэлектроэнцефалография	2020
	Куанова Л. Б.	Семинары по детской неврологии : учеб. пособие	2018

	Н. Г. Коновалова	Неонатология: реабилитация при патологии ЦНС : учебное пособие для вузов	2020
	Никифоров, Анатолий Сергеевич	Неврологические осложнения остеохондроза позвоночника	2015
	Ф. С. Олжаев, А. К. Цой, Б. А. Умбаев	Создание экспериментальной модели фокального ишемического инсульта головного мозга путем окклюзии средней мозговой артерии : методические рекомендации	2021
	Available at the department (link to Classroom)		
	Автор	Наименование книги, издательство	Год издания
	Pandyan	Neurological Rehabilitation Spasticity and Contractures in Clinical Practice and Research	2018
	Каменова С.У. Кужибаева К.К.	Неврологиялык наукастарды клиникалык зерттеу эдістемесі	2018
	Неробкова	Клиническая_электроэнцефалография. Фармакоэлектроэнцефалография	
	Каменова С.У. Кужибаева К.К.	Методика неврологического осмотра.pdf	2018
	Гудфеллоу Дж А	Обследование неврологического больного	2018
Electronic resources	Пирадов М. А.	Тактика_врача_невролога_Практическое_руководство	2020
	Internet resources: Medscape.com - https://www.medscape.com/familymedicine Oxfordmedicine.com - https://oxfordmedicine.com/ Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate Osmosis - https://www.youtube.com/c/osmosis Ninja Nerd - https://www.youtube.com/c/NinjaNerdScience/videos		

	CorMedicale - https://www.youtube.com/c/CorMedicale - medical video animations in Russian language. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q SciDrugs - https://www.youtube.com/c/SciDrugs/videos - video lectures on pharmacology in Russian language.
Simulators in the simulation center	
Special software	1. Google classroom - available in the public domain. 2. Medical calculators: Medscape, Physician's Handbook, MD+Calc - freely available. 3. Directory of diagnostic and treatment protocols for medical workers from the RCHD, the Ministry of Health of the Republic of Kazakhstan: Dariger - available in the public domain.
12.	Tutor Requirements and Bonus System A student in accordance with an individual internship plan: 1) supervises patients in organizations providing pre-medical medical care, emergency medical care, specialized medical care (including high-tech), primary health care, palliative care and medical rehabilitation; 2) participates in the appointment and implementation of diagnostic, therapeutic and preventive measures; 3) conducts documentation and sanitary and educational work among the population; 4) participates in preventive examinations, medical examinations, is present at consultations; 5) participates in clinical rounds, clinical reviews; 6) participates in duty at least four times a month in medical organizations (duty is not taken into account when calculating the workload of an internship student); 7) participates in clinical and clinical-anatomical conferences; 8) is present at pathoanatomical autopsies, participates in the research of autopsy, biopsy and surgical materials; 9) under the supervision of a scientific supervisor, collects material and analyzes data for a scientific project. Bonus system: For extraordinary achievements in the field of future professional activity (clinical, scientific, organizational, etc.), additional points up to 10% of the final assessment can be added to the student (by the decision of the department)
13.	Discipline policy (части, выделенные зеленым, пожалуйста, не изменяйте) Discipline policy is determined by the University's Academic Policy and the University's Academic Integrity Policy. If the links do not open, then you can find the relevant documents in IS Univer. Rules of Professional Conduct: Appearance: office style of clothing (shorts, short skirts, open T-shirts are not allowed to attend university, jeans are not allowed in the clinic)

	Clean and ironed coat medical mask medical cap (or a neat hijab without hanging ends) medical gloves changeable shoes neat hairstyle, long hair should be gathered in a ponytail, or a bun, for both girls and guys. Neatly short cut nails. Bright, dark manicure is prohibited. It is permissible to cover the nails with transparent varnish. badge with full name (full name) 2) Mandatory presence of a phonendoscope, tonometer, centimeter tape, (you can also have a pulse oximeter) 3) Properly executed sanitary (medical) book (before the start of classes and must be updated on time) 4) * Possession of a vaccination passport or other document confirming a fully completed course of vaccination against COVID-19 and influenza 5) Mandatory observance of the rules of personal hygiene and safety 6) Systematic preparation for the educational process. 7) Accurate and timely maintenance of reporting documentation. 8) Active participation in medical-diagnostic and public events of the departments. A student without a medical book and vaccination will not be allowed to see patients. A student who does not meet the requirements for appearance and / or from whom a strong / pungent odor emanates, since such a smell can provoke an undesirable reaction in the patient (obstruction, etc.) - is not allowed to the patients! Преподаватель в праве принять решение о допуске к занятиям студентов, которые не выполняют требования профессионального поведения, включая требования клинической базы! Study discipline: Being late for classes or the morning conference is not allowed. In case of being late, the decision on admission to the lesson is made by the teacher leading the lesson. If there is a good reason, inform the teacher about the delay and the reason by message or by phone. After the third delay, the student writes an explanatory note addressed to the head of the department indicating the reasons for being late and is sent to the dean's office to obtain admission to the lesson. If you are late without a valid reason, the teacher has the right to deduct points from the current grade (1 point for each minute of delay) 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.
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	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 are not 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. Have a laptop / laptop / tab / tablet with you for studying and passing MCQ tests for TBL, boundary and final controls. Taking MCQ tests on phones and smartphones is strictly prohibited.. The behavior of the student at the exams is regulated by the "Rules for the final control", "Instructions for the final control of the autumn/spring semester of the current academic year" (the current documents are uploaded to the Univer IS and are updated before the start of the session); "Regulations on checking text documents of students for the presence of borrowings."
14	1. Constantly preparing for classes: For example, backs up statements with relevant references, makes brief summaries Demonstrates effective teaching skills, assists in teaching others 2. Take responsibility for your learning: For example, manages their learning plan, actively tries to improve, critically evaluates information resources 3. Actively participate in group learning: For example, actively participates in discussions, willingly takes tasks 4. Demonstrate effective group skills For example, takes the initiative, shows respect and correctness towards others, helps to resolve misunderstandings and conflicts. 5. Skillful communication skills with peers: For example, he listens actively, is receptive to nonverbal and emotional signals Respectful attitude 6. Highly developed professional skills: Eager to complete tasks, seek opportunities for more learning, confident and skilled Compliance with ethics and deontology in relation to patients and medical staff Observance of subordination. 7. High introspection:

	For example, recognizes the limitations of his knowledge or abilities, without becoming defensive or reproaching others 8. Highly developed critical thinking: For example, accordingly demonstrates skills in performing key tasks, such as generating hypotheses, applying knowledge to cases from practice, critically evaluating information, making conclusions aloud, explaining the process of reflection 9. Fully complies with the rules of academic behavior with understanding, offers improvements in order to increase efficiency. Observes the ethics of communication – both oral and written (in chats and appeals) 10. Fully follows the rules with full understanding of them, encourages other members of the group to adhere to the rules Strictly adheres to the principles of medical ethics and PRIMUM NON NOCERE	
15.	Distance/Online Learning – Prohibited in Clinical Discipline (части, выделенные зеленым, пожалуйста, не изменяйте)	
	1. According to the order of the Ministry of Education and Science of the Republic of Kazakhstan No. 17513 dated October 9, 2018 "On approval of the List of areas of training with higher and postgraduate education, training in which in the form of external studies and online education is not allowed". According to the above regulatory document, specialties with the discipline code of health care: bachelor's degree (6B101), master's degree (7M101), residency (7R101), doctoral studies, (8D101) - training in the form of external study and online education - is not allowed. Thus, students are prohibited from distance learning in any form. It is only allowed to work out a lesson in a discipline due to the absence of a student for reasons beyond his control and the presence of a timely confirming document (example: a health problem and presenting a confirming document - a medical certificate, a signal sheet of the PHC, an extract from a consultative appointment with a medical specialist - a doctor)	
16.	Approval and review	
Head of the Department		Kurmanova G.M.
Teaching and Learning Quality Academic Committee		Kurmanova G.M.

THEMATIC PLAN AND CONTENT OF PRACTICAL CLASSES

№	Topic name	Content	What to read
	2	3	4
	BLOCK 1		
1	Anatomical and functional structure of central nervous system with the basics of neuroimaging. Neurological status assessment.	-Checks the level of consciousness using the Glasgow Coma Scale (GCS, mini mental test) -Evaluates disturbances of consciousness (delirium, obnubulation, stupor, coma, twilight clouding of consciousness, oneiroid); Neurological examination: -Checks coordination (correct gait, Romberg test, finger-nose test, heel-knee test, diadochokinesis, check for dysmetria); -Evaluates coordination disorders (atactic, hemiplegic, steppage, parkinsonian gait, paraparetic gait); -Assesses the risk of falling (Hamti-Damti scale); -conducts the FAST test (Face Arm Speech Time) and interprets its results (central and peripheral paresis of the facial nerve, hypoglossal nerve, muscle weakness, assessing the time of onset of symptoms to determine patient management tactics). -interprets the results of neuroimaging (the intensity of various structures and environments of the central nervous system on CT and MRI images in various modes) based on knowledge of the anatomical structures of the spinal cord, brain stem, hemispheres on frontal, axial, sagittal sections at various levels; -applies knowledge of the functions of the main anatomical structures of the spinal cord, brain stem, hemispheres to determine the level of damage (topical diagnosis). -understands the influence of CNS neurotransmitters on movement, cognition and the psycho-emotional sphere: acetylcholine, serotonin, glutamate, GABA, dopamine, enkephalins. Homework: Draw sections of the spinal cord and diagrams of the ascending pathways of superficial and deep sensitivity, done by hand, carefully in an album	1. Gusev E.I., Konovalov A.N., Burd G.S. "Neurology and neurosurgery", textbook. Publishing house "Medicine" ISBN 5-225-00969-7 2. Nervous diseases : textbook. manual / A.A.Skoromets, A.P.Skoromets, T.A.Skoromets; edited by prof. A.V.Amelin, prof. E.R.Barantsevich. – 10th ed., supplement. – M. : MEDpress-inform, 2017. – 568 p. : ill. ISBN 978-5-00030-441-9 3. Mental status examination https://next.amboss.com/us/article/br0Hfh?q=consciousness#Z0d961331073bf4f16bde23d4f40ca5d7 4. Stupor and coma in adults - https://www.uptodate.com/contents/stupor-and-coma-in-adults?search=Levels+of+consciousness&source=search_result&selectedTitle=1%7E150&usage_type=default&display_rank=1 5. Glasgow Coma Scale - Adult https://emedicine.medscape.com/article/2172603-overview?_gl=1*1jxb395*_gcl_au*OTc1OTU5OTUzLjE3MzlyMDE5MjA. 6. The cerebral cortex, meninges, basal ganglia, and ventricular system -

			https://next.amboss.com/us/article/WKOP2S Electronic resource: 1. Medscape.com 2. Oxfordmedicine.com 3. Uptodate.com 4. Amboss https://www.amboss.com/us/account/login
2	Sensitivity and its disorders	- Diagnoses different types of sensitivity disorders: decrease/absence of superficial and deep sensitivity, hyperesthesia, paresthesia, dysesthesia, hyperpathia, allodynia, causalgia based on knowledge of the structure of ascending sensory pathways: 1-neuron, 2-neuron, 3-neuron, levels of decussation, cortical sensitivity centers; - determines the type of sensory impairment and localization of the lesion based on a neurological examination and medical history for peripheral mononeuropathy, polyneuropathy, plexopathy, radiculopathy, segmental lesions, lesions of conductors at the level of the spinal cord (myelopathy - complete transverse lesion syndrome, Brown-Séquard syndrome, anterior and posterior spinal artery, extra and intramedullary syndromes) damage to conductors at the level of the brain stem, internal capsule syndrome, thalamic syndrome, damage to cortical sensitivity centers; - determines the topical diagnosis by comparing the results of a neurological examination with the interpretation of diagnostic tests for sensory disturbances and pain: electroneuromyographic (ENMG) signs of axonal and demyelinating lesions; - selects drugs to control pain of various types based on knowledge about NSAIDs, local and general anesthetics (intravenous, gaseous), opiates for the control of nociceptive pain: analgesic ability, duration of action, side effects; - Applies knowledge of antidepressants and anticonvulsants to treat and control neuropathic pain: analgesic capacity, duration of action, side effects; Homework: Draw freehand diagrams of the corticospinal and corticobulbar tracts, neatly in a sketchbook.	1. Gusev E.I., Konovalov A.N., Burd G.S. "Neurology and neurosurgery", textbook. Publishing house "Medicine" ISBN 5-225-00969-7 2. Nervous diseases : textbook. manual / A.A.Skoromets, A.P.Skoromets, T.A.Skoromets; edited by prof. A.V.Amelin, prof. E.R.Barantsevich. – 10th ed., supplement. – M. : MEDpress-inform, 2017. – 568 p. : ill. ISBN 978-5-00030-441-9 3. Mental status examination https://next.amboss.com/us/article/br0Hfh?q=consciousness#Z0d961331073bf4f16bde23d4f40ca5d7 4. Stupor and coma in adults - https://www.uptodate.com/contents/stupor-and-coma-in-adults?search=Levels+of+consciousness&source=search_result&selectedTitle=1%7E150&usage_type=default&display_rank=1 5. Glasgow Coma Scale - Adult https://emedicine.medscape.com/article/21

		Temperature perception test: https://www.youtube.com/watch?v=7it5E9OB12k 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	72603-overview?_gl=1*1jxb395*_gcl_au*OTc1OTU50TUzLjE3MzlyMDE5MjA. 6. The cerebral cortex, meninges, basal ganglia, and ventricular system - https://next.amboss.com/us/article/WK0P2S Electronic resources Online resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
3	Voluntary movement. Central and peripheral components of motor system and their disorders.	- conducts topical diagnostics of various types of voluntary movement disorders based on knowledge of the structure of the cortico-muscular tract: brain (precentral gyrus, corona radiata, internal capsule, brain stem), spinal cord (upper cervical, cervical thickening, thoracic, lumbar thickening, conus medullaris, cauda equina, lateral cord, anterior horn). - diagnoses conduction disorders based on knowledge of the reflex arc and levels of reflex closure in the brain stem and spinal cord, the gamma system; - conducts differential diagnosis between central and peripheral paresis based on knowledge of changes in physiological reflexes, pathological pyramidal reflexes, spasticity and muscle tone and trophism;	1. Gusev E.I., Konovalov A.N., Burd G.S. "Neurology and neurosurgery", textbook. Publishing house "Medicine" ISBN 5-225-00969-7 2. Nervous diseases : textbook. manual / A.A.Skoromets, A.P.Skoromets, T.A.Skoromets; edited by prof. A.V.Amelin, prof. E.R.Barantsevich. – 10th ed., supplement. – M. : MEDpress-

	- conducts an examination using a checklist (muscle strength, muscle tone and trophism, passive and active movements, superficial and deep reflexes in normal and pathological conditions, determines the main pathological reflexes, protective spinal reflexes) and interprets the results; Homework: draw the dermatomes of the upper and lower limbs carefully in the album. 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=PLJIs8ZcKXHUx4C9zjinQ8NY0JetieXF10&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/	inform, 2017. – 568 p. : ill. ISBN 978-5-00030-441-9 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., & 3. Mental status examination https://next.amboss.com/us/article/br0Hfh?q=consciousness#Z0d961331073bf4f16bde23d4f40ca5d7 4. Stupor and coma in adults - https://www.uptodate.com/contents/stupor-and-coma-in-adults?search=Levels+of+consciousness&source=search_result&selectedTitle=1%7E150&usage_type=default&display_rank=1 5. Glasgow Coma Scale - Adult https://emedicine.medscape.com/article/2172603-overview?_gl=1*1jxb395*_gcl_au*OTc1OTU50TUzLjE3MzlyMDE5MjA. 6. The cerebral cortex, meninges, basal ganglia, and ventricular system - https://next.amboss.com/us/article/WK0P2S Electronic resources Online resources:
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		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 Dermatomes and myotomes: https://geekymedics.com/dermatomes-and-myotomes/	1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
4	Lesions of the spinal roots, plexuses and nerves. Autonomic nervous system. Autonomic innervation and functional disorders of organs. Methods for assessing autonomic nervous system	- carries out topical diagnostics for lesions of the spinal roots and primary trunks, cervical, brachial, lumbar and sacral plexuses based on the application of knowledge about their structure and function. - conducts a targeted neurological examination to identify mononeuropathies, tunnel syndromes of the upper and lower limbs. polyneuropathies, plexopathies, radiculopathies. - knows how to prescribe the necessary examination - ENMG, if necessary, neuroimaging - based on the identified neurological deficit; - relieves pain syndrome based on the application of knowledge about drugs for emergency and long-term pain therapy; - recognizes clinical symptoms of damage to the ANS based on the application of knowledge about the structure and function, symptoms of irritation and destruction of the nuclei of the hypothalamus, peripheral autonomic failure, Raynaud's syndrome; anatomical structures of the central part (limbic-hypothalamoreticular complex) and peripheral part (segmental) of the autonomic nervous system; - diagnoses disorders of urination and defecation, pupillary reaction to light, accommodation and convergence; applies knowledge of the autonomic innervation of the bladder (neurogenic bladder, urinary retention or incontinence, urinary urgency), rectum (fecal retention or incontinence, defecation urgency) and the eye (Claude Bernard-Horner syndrome, Pourfour du Petit syndrome)	1. Kaishibaev S.K., Fundamentals of topical and syndromological diagnostics. Part 1, 2018 2. Kaishibaev S.K., Special neuropathology. Part 2, 2018 3. Skoromets A.A., A.P. Skoromets, Neurological status and its interpretation, 2009 4. Nikiforov A.K., Clinical neurology, Vol. 1 - 2, 2002 5. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. Vol. 1, 2018 6. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. T. 2, 2018 7. Gusev, Evgeny Ivanovich, Neurological symptoms, syndromes and diseases: encyclopedic reference, 2014

	- is able to differentiate the signs of central and peripheral urination disorders; - conducts an examination of vital signs with tests to identify the functionality of the autonomic innervation (assessment of blood pressure, heart rate, pulse, respiratory rate, dermographism). - is able to identify dysregulation of the autonomic nervous system when interviewing a patient; - Able to perform a general physical and neurological examination with an emphasis on the functions of the autonomic nervous system. - knows how to interview a patient with urinary disorders (adult and child) in compliance with ethics. - knows how to select drugs that affect cholinergic and adrenergic receptors depending on the type of lesion (anticholinesterase drugs, adrenergic blockers and adrenomimetics, anticholinergic blockers and cholinomimetics, ganglion blockers); - Demonstrates interpersonal communication and patient counseling skills. Anatomy of brachial plexus: https://geekymedics.com/brachial-plexus/ Straight leg raise test - Lasègue's sign: https://www.youtube.com/watch?v=ZSHDCyIvr7o	8. Duus _Topical_Diagnosis_in_Neurology, 2005 9. Luria A.R., Higher cortical functions of man 10. Netter's Neurology, 2nd edition, 2012 Additionally 1. Mark Mumenthaler, Fundamentals of Neurology, 2006 2. Veyn A.M., Lectures on neurology of non-specific structures 3. Cementis Ts.A., Differential diagnostics in neurology, 2005 4. Shtok V.N., Formation of clinical diagnosis in diseases of the nervous system, 2006 5. Yasno N.N., Diseases of the nervous system, Vol. 1-2, 2001 6. Dubinka E.G., Neurology in tables, 2000 7. Clinical Neurology & Neuroanatomy A Localization-Based Approach, 2d Edition, Aaron L. Berkowitz, Chapter 9, 10 Electronic resources Internet resources:1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate
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			4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHz8gi2ugiXr0Q 5. SciDrugs - https://www.youtube.com/c/SciDrugs/videos - видеолекции по фармакологии на русском языке. Electronic resources 1. Neuroscientifically Challenged, www.youtube.com/@neurochallenged 2. Научный центр неврологии, www.youtube.com/@ResearchCenterofNeurology 3. Nucleus Biology, www.youtube.com/@NucleusBiology 4. Ninja Nerd - https://www.youtube.com/c/NinjaNerdScience/videos 5. Osmosis - https://www.youtube.com/c/osmosis 6. CorMedicale - https://www.youtube.com/c/CorMedicale - медицинские видео анимации на русском языке. 7. Анатомия коры головного мозга: https://www.youtube.com/watch?v=2LzZMWGQe1k 8. Исследование высших мозговых функций: https://www.youtube.com/watch?v=k0cph9PAFGQ 9. Amboss https://www.amboss.com/us/account/login
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5	The cerebellum and the extrapyramidal system	-knows the basic connections of the extrapyramidal system and their functional features (postures, muscle tone and stereotypical automated movements) to identify akinetic-rigid (parkinsonism syndrome, Parkinson's disease) and hyperkinetic-hypotonic syndromes (tremor, muscular dystonia, chorea, tics, hemiballismus, athetosis, myoclonus); - corrects disturbances in the functioning of neurotransmitters based on the application of knowledge about the neurophysiological and neurochemical mechanisms of regulation of the activity of the extrapyramidal system to correct disturbances of neurotransmitters: dopamine, acetylcholine, gamma-aminobutyric acid (dopamine, carbidopa, bromocriptine) -determines motor coordination disorders (checklist), ataxia, dyssynergia, nystagmus, dysarthria, muscle hypotonia through special neurological examination methods based on knowledge of the afferent and efferent connections of the cerebellum and vestibular system and their role in the organization of movements; - identifies types of ataxia using topical diagnostics: cerebellar, vestibular, frontal, sensitive. - knows how to select drugs for the treatment of essential tremor (beta blockers, primidone) based on knowledge of the mechanism of action; -Homework: draw sections of the midbrain and pons at different levels, diagrams of visual field impairment, a diagram of the pupillary reflex, a diagram of the nuclei and pathways of the cranial nerve 5, done by hand, neatly in the album. Descending pathways of the central nervous system (extrapyramidal): https://geekymedics.com/the-descending-tracts-of-the-central-nervous-system/ Functional anatomy of the cerebellum: https://geekymedics.com/cerebellum/ Methods of studying the extrapyramidal system (Parkinson's disease): https://geekymedics.com/parkinsons-disease-examination-osce-guide/ Assessment of cerebellar functions: https://geekymedics.com/cerebellar-examination-osce-guide/	1. Gusev E.I., Kononov A.N., Burd G.S. "Neurology and neurosurgery", textbook. Publishing house "Medicine" ISBN 5-225-00969-7 2. Nervous diseases: textbook / A.A.Skoromets, A.P.Skoromets, T.A.Skoromets; edited by prof. A.V.Amelin, prof. E.R.Barantsevich. - 10th ed., suppl. - M.: MEDpress-inform, 2017. - 568 p.: ill. ISBN 978-5-00030-441-9 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. Manji, H., Connolly, S., Kitchen, N., Lambert, C., & Mehta, A. (2014-10). Oxford Handbook of Neurology. Oxford, UK: Oxford University Press. Retrieved 17 Aug. 2021, from https://oxfordmedicine.com/view/10.1093/med/9780199601172.001.0001/med-9780199601172.
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		Romberg's Test: https://www.youtube.com/watch?v=H8VbKdRS-hg	7. In Innes, J. A., In Dover, A. R., In Fairhurst, K., Britton, R., & Danielson, E. (2018). Macleod's clinical examination. 8. Bickley, L. S., Szilagyi, P. G., & In Hoffman, R. M. (2017). Bates' guide to physical examination and history taking. 9. Practical neurology: okulyk/ S.U. Kamenova, K.K. Kuzhybaeva, A.M. Kondybaeva, B.E.Kenzheakhmetova - Almaty, 2021.- 100 Internet resources: 1. Medscape.com 2. Oxfordmedicine.com 3.Uptodate.com 4. Amboss https://www.amboss.com/us/account/login
6	Brain stem and cranial nerves. I, II, III, IV, V, VI. Trigeminal neuralgia	- Conducts a survey and examination to identify damage to the olfactory nerve, formulates a conclusion using medical terminology. -conducts a survey and examination to identify damage to the optic nerve, formulates a topical diagnosis using medical terminology; -conducts a survey and examination to identify damage to the oculomotor, trochlear and abducens nerves, formulates a conclusion using medical terminology. -conducts a survey and examination to identify damage to the trigeminal nerve (central zone (Zelder zone) and peripheral innervation). - is able to differentiate damage to the afferent and efferent parts of the pupillary reflex.	1. Gusev E.I., Konovalov A.N., Burd G.S. "Neurology and neurosurgery", textbook. Publishing house "Medicine" ISBN 5-225-00969-7 2. Nervous diseases: textbook / A.A.Skoromets, A.P.Skoromets, T.A.Skoromets; edited by prof. A.V.Amelin, prof. E.R.Barantsevich. - 10th ed., suppl. - M.: MEDpress-inform, 2017. - 568 p.: ill. ISBN 978-5-00030-441-9

	- is able to formulate a topical diagnosis of alternating syndromes (peduncular and pontine alternating syndromes) based on all identified neurological deficits; - draws up medical records of a patient with alternating syndrome. - knows the principles of pain treatment for trigeminal neuralgia. Homework: draw sections of the pons and medulla oblongata at different levels, diagrams of the nuclei and pathways of the cranial nerves 7, 8, 9, done by hand, neatly in the album. Brain stem anatomy: https://www.youtube.com/watch?v=HYDfhoMun0I Midbrain Lesions: Benedikt, Weber, Claude, Parinaud Syndrome: https://www.youtube.com/watch?v=t47ZbHh3Ytg Olfactory System: Anatomy and Physiology, Pathways: https://www.youtube.com/watch?v=wQJbsOWc344&list=PLJIs8ZcKXHUX4C9zjinQ8NY0JetiesXFl0&index=53 The Optic Nerve (CN II): https://geekymedics.com/the-optic-nerve-cn-2/ Extraocular muscles: https://geekymedics.com/extraocular-muscles/ Eye examination OSCE guide: https://geekymedics.com/eye-examination-osce-guide/ Colour vision assessment OSCE guide/: https://geekymedics.com/colour-vision-assessment-osce-guide/ Fundoscopy ophthalmoscopy OSCE guide: https://geekymedics.com/fundoscopy-ophthalmoscopy-osce-guide/ Visual pathway and visual field defects: https://geekymedics.com/visual-pathway-and-visual-field-defects/	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. Manji, H., Connolly, S., Kitchen, N., Lambert, C., & Mehta, A. (2014-10). Oxford Handbook of Neurology. Oxford, UK: Oxford University Press. Retrieved 17 Aug. 2021, from https://oxfordmedicine.com/view/10.1093/med/9780199601172.001.0001/med-9780199601172. 7. In Innes, J. A., In Dover, A. R., In Fairhurst, K., Britton, R., & Danielson, E. (2018). Macleod's clinical examination. 8. Bickley, L. S., Szilagyi, P. G., & In Hoffman, R. M. (2017). Bates' guide to physical examination and history taking. 9. Practical neurology: okulyk/ S.U. Kamenova, K.K. Kuzhybaeva, A.M. Kondybaeva, B.E.Kenzheakhmetova - Almaty, 2021.- 100 Internet resources: 1. Medscape.com 2. Oxfordmedicine.com 3. Uptodate.com
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		Olfactory nerve examination: https://www.youtube.com/watch?v=uF5KXrlSrjs Optic nerve examination: https://www.youtube.com/watch?v=VB94tYqsIJI Oculomotor, Troclear and Abducent examination: https://www.youtube.com/watch?v=Drpn_ElwmLI Trigeminal nerve examination: https://www.youtube.com/watch?v=7REH6ZycUk	4. Amboss https://www.amboss.com/us/account/login
7	Cranial nerves VII and VIII, IX X, XI, and XII. Facial neuropathy	-conducts a survey and examination to identify lesions of the facial nerve, knows how to differentiate central (supranuclear) and peripheral lesions of the facial nerve, formulates a conclusion using medical terminology. - conducts a survey and examination to identify lesions of the vestibulocochlear nerve, is able to differentiate between central and peripheral lesions of the facial nerve, and formulates a conclusion using medical terminology. - conducts a survey and examination to identify damage to the glossopharyngeal, vagus and hypoglossal nerves, formulates a conclusion using medical terminology. - knows how to recognize signs of bulbar and pseudobulbar palsy. - knows how to formulate a topical diagnosis of alternating syndromes (pontine and bulbar alternating syndromes) based on identified neurological deficits; Homework: draw the outflow paths of cerebrospinal fluid, done by hand, carefully in an album	Kaishibaev S.K., Fundamentals of topical and syndromological diagnostics. Part 1, 2018 2. Kaishibaev S.K., Special neuropathology. Part 2, 2018 3. Skoromets A.A., A.P. Skoromets, Neurological status and its interpretation, 2009 4. Nikiforov A.K., Clinical neurology, Vol. 1 - 2, 2002 5. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. Vol. 1, 2018 6. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. T. 2, 2018

		Facial nerve examination: https://www.youtube.com/watch?v=M4kAQ6V6axs Bell's Palsy: https://www.youtube.com/watch?v=5KUbnVeMYEo&list=PLJIs8ZcKXHUX4C9zjinQ8NY0JetieXF10&index=37 The Vestibulocochlear Nerve (CN VIII): https://geekymedics.com/the-vestibulocochlear-nerve-cn-viii/ The Head Impulse, Nystagmus, Test of Skew (HINTS) Examination: https://geekymedics.com/the-head-impulse-nystagmus-test-of-skew-hints-examination/ Vestibulocochlear nerve examination: https://www.youtube.com/watch?v=AU_mZAPNFjQ	7. Gusev, Evgeny Ivanovich, Neurological symptoms, syndromes and diseases: encyclopedic reference, 2014 8. Duus_Topical_Diagnosis_in_Neurology, 2005 9. Luria A.R., Higher cortical functions of man 10. Netter's Neurology, 2nd edition, 2012 Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
8	General cerebral syndrome - (ICP disorders) and meningeal syndrome. Impaired consciousness - patient in coma	- identifies cerebral syndrome based on targeted questioning (complaints, detailed history), interpretation of the results of a neurological examination and application of knowledge on pathogenesis and pathomorphology; - identifies meningeal syndrome based on targeted questioning (complaints, detailed medical history), interpretation of the results of a neurological examination; - prescribes laboratory and instrumental examinations and interprets their results for the diagnosis of pathologies that occur with cerebral syndrome and the	Kaishibaev S.K., Fundamentals of topical and syndromological diagnostics. Part 1, 2018 2. Kaishibaev S.K., Special neuropathology. Part 2, 2018 3. Skoromets A.A., A.P. Skoromets, Neurological status and its interpretation, 2009

	application of knowledge on pathogenesis and pathomorphology (TBI, neuroinfection, brain space-occupying lesion, CVD); - prescribes laboratory and instrumental examinations and interprets their results for the diagnosis of pathologies that occur with meningeal syndrome and the application of knowledge on pathogenesis and pathomorphology (TBI, neuroinfection, brain space-occupying lesion, CVD); -conducts diagnostics according to the algorithm in case of suspected TBI (concussion, bruise, hematoma, cerebral edema); -conducts a diagnostic search for complaints of headache and fever with cerebral and/or meningeal syndromes (encephalitis: viral, bacterial), meningitis (serous, purulent)); -interprets the results of spinal puncture and CSF for the purpose of differential diagnosis based on the diagnostic capabilities of the cerebrospinal fluid (meningitis (purulent, specific, viral), -conducts a diagnostic search if a space-occupying lesion is suspected (tumors and intracerebral hemorrhage, cysts, parasites, abscesses, brain); -conducts a diagnostic search if CVD with cerebral syndrome is suspected (hypertensive encephalopathy, TIA, strokes, SAH); -Able to conduct a diagnostic search in a patient with impaired consciousness (metabolic, non-metabolic causes of coma).	4. Nikiforov A.K., Clinical neurology, Vol. 1 - 2, 2002 5. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. Vol. 1, 2018 6. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. T. 2, 2018 7. Gusev, Evgeny Ivanovich, Neurological symptoms, syndromes and diseases: encyclopedic reference, 2014 8. Duus_Topical_Diagnosis_in_Neurology, 2005 9. Luria A.R., Higher cortical functions of man 10. Netter's Neurology, 2nd edition, 2012 Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
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9	Seizures	-detects convulsive syndrome based on questioning and examination of the patient and classifies according to the ILAE classification (2017) - provides medical care at the prehospital stage to a patient with seizures - provides emergency care to a patient with seizures (anticonvulsant therapy). - conducts a diagnostic search in a patient with seizures (Mnemonic MIDNIT - neuroinfection, trauma, space-occupying lesion, metabolic, autoimmune, epilepsy); -knows the features of identifying convulsive syndrome in children (neonatal convulsions, infantile spasms), 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). - knows the principle of choosing anticonvulsants based on the mechanism of action, pharmacodynamic and pharmacokinetic characteristics, taking into account the type of seizures, the age of the patient, side effects, concomitant diseases and conditions - pregnancy.	Kaishibaev S.K., Fundamentals of topical and syndromological diagnostics. Part 1, 2018 2. Kaishibaev S.K., Special neuropathology. Part 2, 2018 3. Skoromets A.A., A.P. Skoromets, Neurological status and its interpretation, 2009 4. Nikiforov A.K., Clinical neurology, Vol. 1 - 2, 2002 5. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. Vol. 1, 2018 6. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. T. 2, 2018 7. Gusev, Evgeny Ivanovich, Neurological symptoms, syndromes and diseases: encyclopedic reference, 2014 8. Duus_Topical_Diagnosis_in_Neurology, 2005 9. Luria A.R., Higher cortical functions of man 10. Netter's Neurology, 2nd edition, 2012 Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/
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			3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
10	Damage to the cerebral hemispheres and disorders of higher cortical functions.	-Evaluates the child's psychomotor and speech development, rate of speech development, delay of speech functions (alalia, dyslalia, dysgraphia, dyslexia); -examines and identifies symptoms of disorders of higher brain functions - gnosis, praxis, speech, reading, writing, counting, memory, attention, intelligence and their disorders; aphasia (motor, sensory, amnesic, semantic); apraxia (constructive, spatial, ideomotor); agnosia (visual, auditory, olfactory); astereotnosis, anosognosia, autotopagnosia; dysmnestic syndrome, Korsakov's syndrome; dementia, mental retardation for diagnosing damage to the frontal, parietal, temporal and occipital lobes of the brain; -assess and interpret the patient's level of consciousness using the Glasgow Coma Scale; NIHSS (National Institute of Health Stroke Scale) - conducts a targeted physical and general neurological examination to exclude other (except neurological and mental disorders) causes of speech, memory, gnosis, and praxis disorders; -conducts targeted questioning and examination of the patient for differential diagnosis of speech, memory, gnosis, and praxis disorders; -conducts cognitive tests and evaluates their results to identify cognitive impairment (MMSE, MoCA); Autonomic Nervous System: https://www.youtube.com/watch?v=D96mSg2_h0c&list=PLJIs8ZcKXHUx4C9zjinQ8NY0JetiesXfI0&index=6	Kaishibaev S.K., Fundamentals of topical and syndromological diagnostics. Part 1, 2018 2. Kaishibaev S.K., Special neuropathology. Part 2, 2018 3. Skoromets A.A., A.P. Skoromets, Neurological status and its interpretation, 2009 4. Nikiforov A.K., Clinical neurology, Vol. 1 - 2, 2002 5. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. Vol. 1, 2018 6. Gusev, Evgeny Ivanovich, Neurology and neurosurgery: a textbook in two volumes. T. 2, 2018 7. Gusev, Evgeny Ivanovich, Neurological symptoms, syndromes and diseases: encyclopedic reference, 2014 8. Duus_Topical_Diagnosis_in_Neurology, 2005 9. Luria A.R., Higher cortical functions of man 10. Netter's Neurology, 2nd edition, 2012

		Neural Control of Urination: https://www.youtube.com/watch?v=US0vNoxsW-k&list=PLJIs8ZcKXHUX4C9zjinQ8NY0JetieXF10&index=35	Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
11	Introduction to medical psychology. Principles of constructing clinical-psychopathological and pathopsychological research.	-has a concept of the life cycle (stages of ontogenetic development of mental functions, age-related crises and crisis periods of development); knows the criteria for mental (psychological) health and pathology in the age aspect; - masters methods of studying the structure of mental disorders, the patterns of its decay in comparison with the norm, classification and qualification of psychopathological phenomena in the concepts of modern clinical psychology; - knows how to establish trusting psychological contact with patients using communication methods and communication methodology for behavioral disorders associated with mental disorders: an aggressive patient, a patient experiencing loss (definition of grief), reporting bad news, a patient with various types of psychomotor agitation, etc.; - knows how to listen to the patient and pose questions in a form understandable to the patient, taking into account his mental state; - knows the methods of physical and neurological examination and is able to assess mental status for a comprehensive assessment of the state of mental health; - knows how to search for socio-psychological causes and knows methods for correcting deviant behavior: abuse of various psychoactive substances;	A.S. Tiganov Общая психопатология: Курс лекций / А.С. Тиганов. — 2-е изд., доп. — М.: ООО «Издательство «Медицинское информационное агентство», 2016. General psychopathology. Behavioral Science Barbara Fadem.Ph.D Copyright © 2017 Wolters Kluwer Copyright © 2014, 2009, 2005 Lippincott, Williams & Wilkins, a Wolters Kluwer business. Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine

		propensity to commit crimes; deviations in sexual behavior; fanaticism; behavior aimed at taking one's own life and etc.; - knows the methodological principles of pathopsychological diagnosis and correction in children, as the basis for psychoprophylaxis and correction of personality deviations and psychosomatic disorders, endogenous psychoses in the development of children with the assimilation of the main directions of psychological support for children with disabilities and developmental features in all spheres of life; - knows the methods of interviewing patients (legal representatives), observes the patient's behavior during the study, uses an algorithm for conducting a psychiatric conversation (collection of subjective and objective data, identification of clinical and pathopsychological patterns of mental disorders, identification of clinical and psychopathological symptoms and syndromes); - applies knowledge in the field of medical psychology at all levels of providing medical care to patients - primary care, hospitals of various profiles, specialized institutions. Cerebral Cortex Anatomy & Function: https://www.youtube.com/watch?v=2LzZMWGQe1k Neurological examination; higher brain functions: https://www.youtube.com/watch?v=k0cph9PAFGQ	2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
12	Clinical examination of patients. Sensations and perception. Memory. Attention.	Able to identify clinical-pathopsychological and clinical-psychopathological symptoms and syndromes of disturbance of sensations and perception in general clinical practice: - is able to assess the disorder of sensations based on the mechanism of action of the analyzers, their interaction with the peripheral part (receptors), nerve pathways and the central part, which includes subcortical and cortical nerve centers Memory, brain attention, responsible for recognition this or that sensation; - knows the functions of the “modality” of analyzers - visual, auditory, tactile, olfactory, gustatory, gravitational, proprioceptive and interoceptive and their	A.S. Tiganov Общая психопатология: Курс лекций / А.С. Тиганов. — 2-е изд., доп. — М.: ООО «Издательство «Медицинское информационное агентство», 2016. General psychopathology. Behavioral Science Barbara Fadem.Ph.D Copyright © 2017 Wolters Kluwer

	disorders in various mental disorders from the position of differential diagnosis in autistic disorder, hysterical reactions, depressive disorders, other borderline disorders, psychoorganic syndrome, etc.; - knows the mechanisms of complex interaction between sensations and perception to obtain a holistic image and the influence of emotions, memory, attention and thinking on the quality of perception; knows how to isolate and carry out differential diagnostics of hallucinations (true and pseudohallucinations), illusions, senestopathies and paresthesias, psychosensory disorders in psychosomatic and somatoform disorders, in endogenous psychoses and other disorders; - has theoretical knowledge in the field of experimental research of the function of sensations and perception: Aschaffenburg, Reichardt, Lipman test; Classification of objects, Poppelreiter tables, tests for orientation in the diagram of one's body (right - left) and in space; - knows the basics of the physiological processes of the attention function (involuntary, voluntary and post-voluntary) and characteristics (volume, concentration, stability, switchability and distribution) and identifies pathological symptoms and syndromes of attention disorder: instability of attention (pathological distractibility in ADHD), exhaustion of attention (in the syndrome attention deficit with hyperactivity, with organic brain damage); slowness of attention (viscosity, pathological rigidity) as a manifestation of slow thinking (bradyphrenia) in organic diseases of the brain, including epilepsy, vascular diseases, etc.; narrowing the scope of attention with an affectively narrowed consciousness, the so-called. "tunnel vision", with affective shock reactions; inattention (aprosexia) or inhibition of attention processes (during intoxication with psychoactive substances, with psychoorganic syndrome, disorder of consciousness, etc.); hyper-distractibility (hypermetamorphosis or hyper-waking); - knows the basic physiological mechanisms of memory (remembering information (fixation), its preservation (retention), remembering (reproduction) and forgetting to identify clinical signs of memory dysfunction; - knows the classification of quantitative and qualitative memory disorders for diagnostic search (hypo/amnesia, hypermnesia, paramnesia, disturbances of the sense of familiarity, Korsakoff amnesic syndrome, selective ecmnesia); - knows how to identify symptoms of disturbances in the processes of attention and memory, both during a conversation and during an experimental study:	Copyright © 2014, 2009, 2005 Lippincott, Williams & Wilkins, a Wolters Kluwer business. Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
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		Memorizing 10 words, Method of indirect memorization, Method of pictograms, Wechsler Memory Rating Scale.	
13	Clinical examination of patients. Thinking and intelligence. Consciousness.	- Able to identify the main types of thinking disorders in patients in general clinical practice to verify identified psychopathological and pathopsychological symptoms and syndromes: disturbances in the pace of thinking, disturbances in the harmony of thinking, disturbances in the purposefulness of thinking, overvalued ideas, obsessions; pathopsychological assessment of thinking disorders; - knows the classification of delusional ideas, differential diagnosis for endogenous psychoses, borderline mental disorders and psychoorganic syndrome, as well as “age-specific” types of delusions in content; - knows and is able to differentiate the clinical signs of delusional disorder by form and content; - knows speech disorders caused by mental disorders and organic brain damage; - knows the features of thinking disorders in schizophrenia, dementia, epilepsy, due to strokes, acute and chronic infections, trauma, Alzheimer's disease, autism, intellectual disability, acute and chronic psychosis, deficiency of B vitamins, folic acid, severe disorders metabolism in NBO, etc.; - knows how to compare experimental data and carry out differential diagnostics in order to have an idea of the nature of the thinking disorder: Test for Schizotypal Disorder Magic Ideation Scale (MIS); “The fourth odd one” methods; Association experiment; Folding pictures from segments, plotting from unfinished pictures, etc.; - knows about the types and severity of congenital and acquired intellectual disabilities; - knows how to use special tests to diagnose intellectual disability (degree) and dementia (MoCA test), Clock Test, Projective techniques; - knows how to identify clinical and diagnostic signs of a type of consciousness disorder in order to provide qualified medical care; - knows the ontogenesis of the development of consciousness (objective, self-awareness or self-awareness, social consciousness), the main clinical and diagnostic signs of qualitative and quantitative disorders of consciousness; - knows how to use the Glasgow Coma Scale (GCS) for children over 4 years of age and adults;	A.S. Tiganov Общая психопатология: Курс лекций / А.С. Тиганов. — 2-е изд., доп. — М.: ООО «Издательство «Медицинское информационное агентство», 2016. General psychopathology. Behavioral Science Barbara Fadem.Ph.D Copyright © 2017 Wolters Kluwer Copyright © 2014, 2009, 2005 Lippincott, Williams & Wilkins, a Wolters Kluwer business. Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login

		- knows how to differentiate the types of darkened consciousness, knows the differential criteria of darkened consciousness according to Jaspers;	
14	Emotional-volitional sphere. Motor-volitional sphere. Personality.	Knows physiological and pathophysiological mechanisms and is able to identify clinical symptoms and syndromes of impaired memory and motor-volitional functions: - knows how to determine the patient's emotional state through experimental research - A. Beck's tests; - is able to recognize disorders of the emotional-volitional sphere and the risk of suicide; - knows the clinical and differential criteria for emotion disorders in mood disorders (affective disorders), emotion disorders in neurotic stress-related and somatoform disorders, in personality and behavior disorders in adults; - is able to recognize clinical criteria for emotional disorders and behavioral disorders, usually beginning in childhood and adolescence, incl. oppositional defiant disorder; - knows how to provide assistance in emergency situations, knows the clinical signs of acute affective reactions, grief reactions; when reporting bad news, during an interrupted (incomplete) suicide attempt; - knows about the main types of disorders of the motor-volitional sphere; - knows the main disorders of the volitional sphere; - Knows methods and clinical pathopsychology for the differential diagnosis of a conditionally mentally healthy person and an individual with an anomaly of personality development; - identifies the recognition of behavioral disorders that impede normal development and functioning, the mechanisms of formation of psychological disorders, including cruelty and aggressive behavior, types of pathologizing education; - knows the clinical criteria for personality disorder; - knows the forms of psychological assistance at the primary health care level for people in difficult life situations, knows the theoretical foundations of victimology and suicidology; - knows and has the skills to interpret the conclusion of a medical psychologist - projective techniques, the Luscher test, skills in using A. Beck tests and the Taylor anxiety scale, the Hamilton clinical scale to identify the level of depression and the risk of suicide, etc.	A.S. Tiganov Общая психопатология: Курс лекций / А.С. Тиганов. — 2-е изд., доп. — М.: ООО «Издательство «Медицинское инфор- мационное агентство», 2016. General psychopathology. Behavioral Science Barbara Fadem.Ph.D Copyright © 2017 Wolters Kluwer Copyright © 2014, 2009, 2005 Lippincott, Williams & Wilkins, a Wolters Kluwer business. Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login

15	Sleep disorders	Knows the physiological mechanisms of sleep (theories: reflex, hypnotoxin theory, biochemical, biorhythmological), - types of sleep (periodic daily, periodic seasonal, hypnotic, narcotic, electrosleep, pathological), sleep phases (slow and fast phases); - knows EEG rhythms during sleep; - knows the phases of sleep and the role of neurotransmitters in their formation; - knows sleep disorders associated with breathing (obstructive sleep apnea, central sleep apnea, Pickwick syndrome), diagnostic methods and treatment principles; - knows the clinical signs of sleep disorders in schizophrenia, bipolar disorder and other mental disorders; - knows about narcolepsy and its mechanisms of occurrence, principles of treatment; Knows the ontogenesis of sexual development, types of sexual disorders in the age aspect in children and adolescents (premature psychosexual development, pathology of gender-role behavior, disorders of psychosexual orientation, disorders of gender self-identification, increased sexual desire); - knows the diagnostic criteria for paraphilia (disorder of sexual preference, according to the choice of the object of desire and the type of realization of desire).	A.S. Tiganov Общая психопатология: Курс лекций / А.С. Тиганов. — 2-е изд., доп. — М.: ООО «Издательство «Медицинское инфор- мационное агентство», 2016. General psychopathology. Behavioral Science Barbara Fadem.Ph.D Copyright © 2017 Wolters Kluwer Copyright © 2014, 2009, 2005 Lippincott, Williams & Wilkins, a Wolters Kluwer business. Electronic resources Internet resources: 1. medscape.com - https://www.medscape.com/familymedicine 2. Oxfordmedicine.com - https://oxfordmedicine.com/ 3. Uptodate.com - https://www.wolterskluwer.com/en/solutions/uptodate 4. Lecturio Medical - https://www.youtube.com/channel/UCbYmF43dpGHZ8gi2ugiXr0Q 5. Amboss https://www.amboss.com/us/account/login
	The final lesson		

RUBRICATOR FOR ASSESSING LEARNING OUTCOMES
with summative assessment

Rating calculation formula

For the 4th 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 score: OAR 60% + exam 40%

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

Team based learning – TBL

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

Case-based learning CBL

		%
1	Interpreting survey data	10
2	Interpretation of physical examination findings	10
3	Preliminary diagnosis, justification, PD, examination plan	10
4	Interpretation of lab-instrumental examination data	10
5	Clinical diagnosis, problem sheet	10
6	Management and treatment plan	10
7	The validity of the choice of drugs and treatment regimens	10
8	Evaluation of effectiveness, prognosis, prevention	10
9	Special problems and questions on the case	10
10	Companion rating (bonus)	
		100%

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 summaries	Preparing for classes	Constantly not preparing for class For example, insufficient reading and study of problematic issues, makes little

	Demonstrates effective teaching skills, assists in teaching others	10 8 6 4 2 0	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 cues Respectful 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 cues Use of obscene language
6	Highly developed professional skills: Eager to complete tasks, seek opportunities for more learning, confident and skilled Compliance with ethics and deontology in relation to patients and medical staff Observance of subordination.	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 коллектива Neglects 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 rules Strictly 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 rules Creates 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 PROFESSIONAL SKILLS OF STUDENTS

Appendix 1

Examination of motor function, proprio- and superficial reflexes

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
	<i>Superficial reflexes:</i>					
1.	volume of active movement					
2.	muscle tone of the upper and lower limbs					
3.	muscle strength of the upper and lower limbs					
4.	muscle trophism					
5.	conjunctival reflex					
6.	pharyngeal reflex					
7.	soft palate reflex					
8.	upper abdominal reflex					

9	middle and lower abdominal reflex					
10	plantar reflex					
	Deep reflexes:					
11	superciliary reflex					
12	nasopalpebral reflex					
13	mandibular reflex					
14	biceps reflex					
15	triceps reflex					
16	carpo-radial reflex					
17	scapular-humeral reflex					
18	deep abdominal reflex					
19	knee jerk reflex					
20	achilles reflex					

Appendix 2

Examination of pathological reflexes and clonuses

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	
		5	4	3	2	
	Study of reflexes of oral automatism:					
1	proboscis					
2	exploratory and sucking					
3	reflex Marinescu-Radovici					
	Reflexes of spinal automatism of the upper limbs:					
4	Rassolimo					

5	Bechterew's reflex					
6	Zhukovsky Reflex					
7	Jacobson-Laska					
8	Hand clonus					
9	patella clonus					
10	Foot clonus					
	<i>Pathological extensor reflexes from the lower extremities:</i>					
11	Babinsky					
12	Oppenheim					
13	Gordon					
14	Schaeffer					
15	Chaddock					
	<i>Flexor pathological reflexes from the lower extremities:</i>					
16	Rassolimo					
17	Bekhterev I					
18	Bekhterev II					
19	Zhukovsky					
20	Flexor tangential reflex					

Appendix 3

Examination of sensitivity and symptoms of tension of the nerve trunks

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
	<i>Superficial sensitivity</i>					
1	pain sensitivity					
2	temperature sensitivity					
3	tactile sensitivity					
	<i>Deep sensitivity</i>					

4	joint-muscular sense(position sense)					
5	sense of weight					
6	Sense of pressure					
7	vibration sensitivity					
8	kinesthetic sensitivity					
9	two-dimensional sense					
10	sense of discrimination					
11	stereognosis					
	<i>Examined the symptoms of the tension of the nerve trunks:</i>					
12	Neri					
13	Dejerine					
14	Lasegue I					
15	Lasegue II					
16	Wasserman					
17	Matskevich					
18	Sikar					

Appendix 4

Examination of the function of the cranial nerves (I, II, III, IV, VI)

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
1	Examination of the olfactory nerve					
2	Examination of visual acuity					
3	Examination of visual fields					
4	Examination of Color Sensing					
5	Estimate the size of the eye slits and pupils					

6	Examination of the direct reaction of the pupils to light					
7	Examination of the friendly response of the pupils to light					
8	Examination of the movement of the eyeballs					
9	Examination of Convergence					
10	Examination of accommodation					

Appendix 5

Examination of the function of the trigeminal nerve

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
1	Determination of soreness at the exit sites of the branches of the trigeminal nerve					
2	Examination of the movement of the lower jaw					
3	Determine the tone and trophism of the chewing muscles					
4	Examination of the mandibular reflex					
5	Examination of the surface sensitivity of the face along the branches of the trigeminal nerve					
6	Examination of the surface sensitivity of the face by Zelder zones					

7	Examination of deep facial sensitivity					
8	Interviewed subjective data for trigeminal neuralgia: - are there unilateral, paroxysmal, short-term pains on the face?					
9	- Is the pain relieved by chewing, talking or washing?					

Appendix 6

Examination of the function of the cranial nerves (VII, VIII, IX, X, XI, XII)

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
1	Ask to raise eyebrows					
2	Ask to frown					
3	Ask to close eyes tightly					
4	Examination of the symmetry of the nasolabial folds					
5	Ask to puff out cheeks (sail symptom)					
6	Ask to whistle with lips					
7	Taste detection on the front 2/3 of the tongue					
8	Whispering Research					
9	Investigation of the presence of nystagmus					

	<i>Bulbar group CN (IX, X, XI, XII):</i>					
10	Swallowing function examination (choking, dysphagia,)					
11	examination of Phonation					
12	examination of the pharyngeal reflex					
13	examination of the movement of the soft palate					
14	examination on the taste of the root of the tongue					
15	examination of head turns to the sides					
16	Shoulder Shrug and Shoulder Adduction Study					
17	Ask to stick out tongue and explore the symmetry, movement and trophism of the tongue					

Appendix 7

Examination of the function of extrapyramidal system and cerebellum

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
	<i>Cerebellum</i>					
1	Ask the patient to walk in one line, Romberg test evaluation					
2	Diadochokinesis					

3	Finger test, Finger-finger test					
4	Dysmetria test					
5	Knee-heel test					
6	Examined Babinsky's asynergy					
7	Examined muscle tone					
8	Examined handwriting					
9	Examined Speech					
10	Examination of nystagmus					
	EPS:					
11	Ask the patient to stand up and walk around the room					
12	Examination of handwriting (ask to write)					
13	Examined the Westphal Phenomenon (from foot)					
14	Examined the Foix Thévenard phenomenon (from his knees)					
15	Stuart-Holmes test					
16	Examined the symptom of the eye, face, tongue					
17	Examined the muscle tone of the upper and lower limbs					

Appendix 8

Examination of meningeal symptoms

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills

		5	4	3	2	1
1	Survey of subjective data					
2	assessment of the patient's condition					
3	Examined the stiffness of the muscles of the back of the head					
4	Examined Kernig's symptom					
5	Investigated the upper symptom of Brudzinsky					
6	Investigated the middle symptom of Brudzinski					
7	Investigated the lower symptom of Brudzinsky					
8	Mendel's symptom.					
9-10	Bekhterev's facial reflex.					

Appendix 9

Examination of the autonomic nervous system

№	Evaluation criteria	Evaluation criteria				
		carried out systematically, technically correct and efficiently	carried out systematically, but with minor technical inaccuracies	not carried out fully enough with technical errors	conducted chaotically, with omissions, without effect	does not have manual skills
		5	4	3	2	1
1	Local dermographism					
2	Painful dermographism (reflex)					
3	Stange test					
4	Orthostatic test (Prevel)					
5	Clinostatic test (Danielopol)					
6	Cold test					
7	Solar reflex					
8	Pilomotor reflex					

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

№	Criteria	10	8	6	4	2
		<i>Excellent</i>	<i>Good</i>	<i>Satisfactory</i>	<i>Need correction</i>	<i>Bad</i>
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 data Physical examination skills learned	Incomplete or Inaccurate Physical examination skills need to be improved	Important data are missing. Inappropriate physical examination skills
6	Medical history presentation	Maximum full description and presentation Understands 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 logicity in statement, but it is possible to keep track of the main idea	Jumps from one on another, it is difficult to catch the main idea
5	Recourses	Literary data are submitted in logical interrelation, show deep study of the main and padding informational resources	Literary data show study of the main literature	Only ordinary recourses	Inconsistency and randomness in statement of data, an inconsistency There is no knowledge of the main textbook Using of Google

6	Practical application	High	Good	moderate	no
7	Patient focusing	High	Good	moderate	no
8	Applicability in future practice	High	Good	moderate	no
9	Presenation	Correctly, to the place all opportunities of Power Point or other e-softs, the free 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
b o n u s	Time management*	10 For before deadline	In time	Good quality but a little late Minus 2-4	After deadline more than 24 hours Minus 10
b o n u s	Rating**	10 points additional	Outstanding work, for example: The best work in group Creative approach Innovative approach to realization of a task According to the proposal of group		
	* The deadline is determined by the teacher, as a rule - the day of the boundary control ** thus, you can get 90 points as much as possible, to get above 90-you need to show a result higher than expected				