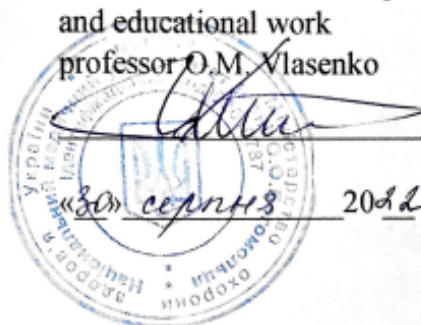


BOGOMOLETS NATIONAL MEDICAL UNIVERSITY

Department of neurology

«APPROVED»Vice-rector for scientific-pedagogical
and educational work

professor O.M. Vlasenko

**WORKING PROGRAM OF EDUCATIONAL DISCIPLINE
«NEUROLOGY, INCLUDING NEUROSTOMATOLOGY»****Educational level – second (master`s) level****Field of knowledge - 22 «health care»****Specialty - 221 «Dentistry»****Educational program - «Dentistry»**

2022-2023

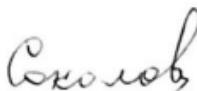
Work program «Neurology, including neurostomatology» for students at the second (master's) level of higher education, specialty «Dentistry», IV year of the Faculty of Dentistry.

Developers: head of department, MD, professor L.I.Sokolova; PhD, associate professor G.G.Symonenko.

The work program was approved at the meeting of the department

Protocol dates 30.08.2022, No 1.

Head of Department,
professor



L.I.Sokolova

Work program was adopted at the meeting of the cyclic methodical commission for therapeutic disciplines 29.08. 2022, protocol No 1.

Head of the cycle methodical commission
For the therapeutic disciplines,
professor



O.B.Yaremenko

Reapproved:

on 20__/20__ ac.yr. _____ » _____ 20__ yr. Protocol No ____
(signature) (surname)

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1. Description of the educational discipline

Name of indicators	Field of knowledge, direction of training, educational and qualification level	Characteristics of the academic discipline
		Full-time education
Number of credits – 1.5	Field of knowledge 22 “Health care”	Normative, mandatory
Modules -1 Content modules - 1	Specialty 221 “Dentistry”	4th year of education VII or VIII semester
Individual research task on topics of independent work of students (IWS)		Lectures – 6 hours Practical studies – 29 hours Individual work of students – 10 hours
Total number of credits/hours – 1.5/45		Individual independent work – 0 hours
Weekly hours for full-time education: classroom hours – 35, students’ independent work – 10	Second (master’s) level of higher education	Type of control – final control (FC)

2. Purpose, expected learning outcomes and criteria for evaluating learning outcomes.

Goal

The purpose of teaching the Program:

The final goals are established on the basis of the Standard of training of a doctor by specialty, respectively, and are the basis for building the content of educational disciplines. The description of goals is formulated through skills in the form of target tasks (actions). On the basis of the final goals of the section, specific goals are formulated in the form of certain skills (actions), target tasks that ensure the achievement of the final goal of studying the discipline, namely:

The ultimate goals of studying the academic discipline «Neurology, including neurostomatology»:

- To know the main signs of damage to the nervous system;
- To know etiopathogenesis, clinical manifestations of neurodental diseases;
- To know the tactics of differential diagnosis and treatment of neurostomatological patients;
- To learn the principles of emergency care in case of urgent conditions with damage to the nervous system, which can be encountered in the practical work of a dentist;

- Be familiar with the methods of prevention of neurostomatological diseases and rehabilitation of patients with this pathology.

The main tasks of studying the academic discipline «Neurology, including neurostomatology»:

- To determine the leading symptoms and syndromes in case of the most common neurological pathology;
- To provide emergency medical care in case of emergency conditions in the clinic of nervous diseases;
- To carry out examinations of patients with neurodental pathology;
- To analyze examination data of patients with neurodental pathology;
- To plan the management tactics of a dental patient with neurological pathology;
- To carry out differential diagnosis of neurostomatological diseases;
- To make a preliminary clinical diagnosis in case of neurostomatological pathology.

Results of studying the academic discipline «Neurology, including neurostomatology»:

to know:

- The concept of reception, clinical classification of sensitivity, types of sensitive disorders on the face and oral cavity;
- Symptoms of central and peripheral muscle paresis;
- Motor disorders in case of damage to the cortico-nuclear pathway, motor nuclei of cranial nerves and motor fibers of cranial nerves;
- The anatomical and physiological features of the cerebellum and the syndromes of its damage;
- Peculiarities of ischemic and hemorrhagic strokes, the principles of prevention and emergency treatment of cerebral blood circulation disorders;
- Syndromes of damage to the Autonomic nervous system in the maxillofacial area;
- Symptoms and syndromes of the cranial nerves damage;
- Classification of prosopalgias, their diagnostics and emergency medical care to such patients;
- Classification, clinics, diagnostics, prevention, rehabilitation and emergency of neurostomatological diseases.

To be able to:

- Identify sensory, motor and coordination disorders of the nervous system;
- Diagnose neurostomatological diseases;
- Interpret the results of neuroimaging, ultrasound and electrophysiological methods of examination of neurological patients;
- Provide emergency care to urgent neurological patients

Assessment of learning outcomes

«5»	«4»	«3»	«2»
<i>Criteria for evaluating a student's practical skills</i>			
The student independently performed this or that practical skill, clearly chose the necessary method of providing assistance in this or that clinical situation.	The student independently performed this or that practical skill, but at the same time made two or three insignificant mistakes.	The student cannot independently choose an adequate method of assistance in this or that clinical situation, makes gross mistakes when performing practical skills.	The student does not demonstrate knowledge of ways to provide assistance in this or that situation, cannot give a single correct answer to a question.
<i>Criteria for evaluating a student's theoretical knowledge</i>			
The student independently, clearly and consistently, with comprehensive completeness, using data from additional literature, answered all the questions.	The student maturely orients himself in the material, but during the answer he made two or three mistakes that are not fundamentally important.	The student knows the actual material in the full scope of the course program, but finds it difficult to independently and systematically explain the answers, forcing the teacher to offer him leading questions.	The student does not demonstrate knowledge and is poorly oriented in the basic theoretical material of the neurology including neurostomatology course, which is revealed by offering him additional questions.
<i>Criteria for evaluating the performance of test tasks</i>			
90-100 %	75-89 %	60-74 %	Less than 59 %
<i>Evaluating criteria for solving situational tasks</i>			
3 from 3	2 from 3	1 from 3	None have been resolved
<i>Criteria for evaluating student's activity</i>			
Very active	Active	Less active	Passive
The student works actively during the entire practical session, is able to express his own attitude to alternative considerations on this problem,	The student works actively during the practical session, the presentation of the material is logical, the questions are covered with conclusions, the student has	The student has generally mastered the essence of the questions on this topic, tries to analyze the questions, draw conclusions and solve problems. But	The student does not show activity when working independently and as part of a group. Shows lack of interest and desire to work.

demonstrates the ability to independently and argumentatively present the material, analyze phenomena and facts, make independent generalizations and conclusions. Demonstrates the ability to work in a group (as a leader), plan time, produce new ideas, evaluate the quality of the work performed, be critical and self-critical, evaluate his knowledge and the knowledge of others.	demonstrated the ability to work in a group, plan time, develop new ideas, evaluate the quality of the work performed, be critical and self-critical, evaluate his knowledge and the knowledge of others. But in order to manifest its qualities, it needs external stimulus.	in class he behaves passively, he only responds when called upon by the teacher. Does not show activity in the group, or only after the leader's remark.	
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3. Program of academic discipline

Content module 1. Neurology, including neurostomatology

Topic 1.

Pathology of sensation function of the Nervous system. Classification of sensation.

Methods of sensory function examination. Types and kinds of sensory disorders.

Classification of sensation. Methods of examination of various types of sensations.

Localization of neurons of superficial and deep sensitivity. Conductive pathways of sensitivity.

Kinds of sensitive disorders: quantitative and qualitative. Methods of their detection.

Types of sensitive disorders: central and peripheral. Diagnosis of disorders of various types of sensitivity.

Syndromes of impaired sensitivity at different levels – a topical diagnosis.

Topic 2.

Pathology of coordination function of the Nervous system. Types of ataxias.

Functions of the cerebellum and signs of its damage. Types of ataxia: cerebellar, sensitive, vestibular, cortical.

Topic 3.

Pathology of reflex-motor function of the Nervous system. Methods of reflex-motor system examination. Central and peripheral paralyses.

Classification of physiological reflexes. Unconditioned superficial and deep reflexes.

Reflex arc of monosynaptic reflex. Quantitative changes in reflexes.

Pathological reflexes: extensor, flexor and oral automatism (subcortical) groups of pathological reflexes.

Definition, functions and pathology of the pyramidal system.

Types of paralyses: central and peripheral.

Syndromes of movement disorders – a topical diagnosis.

Topic 4.

Pathology of I, II, III, IV, VI cranial nerves Methods of vision fields and eye-balls movements examination. Vegetative innervation of eye. Syndromes of somatic and autonomic innervation of eye.

Olfactory analyzer and signs of its damage.

Visual analyzer and signs of its damage – a topical diagnosis.

Pupillary reflex, syndromes of violation of pupillary reactions.

Signs of damage to the nerves of the oculomotor group.

Vegetative innervation of the eye and symptoms of its disturbance.

Eye innervation and its disorders.

Topic 5.

Pathology of V, VII, VIII cranial nerves. Methods examination of sensation on face and movements of mimic muscles.

Signs of damage to the trigeminal nerve system, impaired sensitivity in the zone of peripheral and segmental innervation.

Disruption of innervation of masticatory muscles.

Signs of impaired innervation of mimic muscles of central and peripheral genesis.

Symptoms of damage to the facial nerve at different levels.

Pathology of the cochlea-vestibular apparatus.

Topic 6.

Pathology of IX-XII cranial nerves. Methods of examination of IX-XII cranial nerves. Bulbar and pseudo-bulbar syndrome.

Dysfunction of the glossopharyngeal and vagal nerves.

Signs of impaired innervation of the tongue muscles – central and peripheral genesis.

Definition of bulbar and pseudobulbar syndromes, their common features, differential diagnosis, prognosis.

Topic 7.

Neurostomatological diseases. Prosopalgias of neuropathic genesis. Neuralgia of trigeminal and glossopharyngeal nerve. Principles of treatment.

Systematization of neurostomatological diseases.

Neuropathy of the facial nerve – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Neuralgia of the trigeminal nerve (central genesis) – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Odontogenic neuralgia and neuropathy of the trigeminal nerve – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Postherpetic neuralgia of the trigeminal nerve (central genesis) – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Dental plexalgia – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Neuropath of the alveolar nerves (upper and lower) – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Neuropathy of buccal nerve – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Neuropathy of lingual nerve – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Neuralgia of glossopharyngeal nerve – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Topic 8.

Pathology of Autonomic nervous system. Vegetative prosopalgias. Principles of treatment.

Suprasegmental and segmental levels of the autonomic nervous system.

Segmental vegetative syndromes.

Suprasegmental vegetative syndromes.

Ganglionitis of the ciliary node: etiology, diagnosis, treatment.

Ganglionitis of the pterygoid node: etiology, diagnosis, treatment.

Ganglionitis of the otic node: etiology, diagnosis, treatment.

Ganglionitis of the submandibular and sublingual nodes: etiology, diagnosis, treatment.

Ganglionitis of cervical sympathetic nodes: etiology, diagnosis, treatment.

Topic 9.

Prosopalgias of other geneses (muscular, vessel, somatic, psychogenic). Giant-cell arteritis. Myo-fascial pain syndrome of face. Principles of treatment.

Classification of prosopalgia.

Facial Pain Diary.

Migraine – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Cluster headache – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Temporal arteritis – etiology, pathogenesis, clinic, diagnosis, complications, principles of treatment.

Myofascial pain syndrome of the face – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Stomalgia, glossalgia – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Differential diagnosis with facial pain in diseases of the eyes and ENT organs.

Atypical (psychogenic) facial pain – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Topic 10.

Meningeal syndrome. Secondary purulent meningitis. Principles of diagnostics.

Emergency care.

Characteristics of cerebrospinal fluid.

Meningeal syndrome: general brain and membrane symptoms.

Classification of meningitis.

Clinical signs of meningitis.

Etiology, diagnosis and principles of treatment of secondary purulent meningitis.

Topic 11.

Ischemic and hemorrhagic strokes. Principles of diagnostics. Emergency care.

Classification of ischemic stroke.

Etiology, pathogenesis and diagnosis of ischemic stroke.

Classification of hemorrhagic stroke.

Etiology, pathogenesis and diagnosis of hemorrhagic stroke.

Basic therapy of cerebral stroke, emergency care.

Principles of differential therapy of stroke.

Topic 12.

Epilepsy. Epileptic status. Clinics. Emergency care. Non-epileptic paroxysmal states: clinics, Emergency care.

Classification of epilepsy and epileptic attacks.

Diagnosis of epilepsy, principles of treatment.

Epileptic status: diagnosis, emergency care.

Classification, diagnosis and emergency care in non-epileptic paroxysmal conditions.

Topic 13.

Types of headaches.

Classification of headache.

Headache diary.

Migraine – classification, etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Tension headache – pathogenesis, clinic, diagnosis, principles of treatment.

Cluster headache – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Topic 14.

Disturbance of consciousness in clinic of nervous diseases.

State of consciousness and content of consciousness.

Productive and non-productive signs of impaired consciousness.

Etiology of unconsciousness.

Clinical classification of disorders of consciousness.

Glasgow coma scale.

Classification of coma types.

Signs of hypertensive intracranial syndrome, principles of treatment.

Types of brain inclinations.

Emergency aid in case of loss of consciousness.

Topic 15.

Other neurogenic diseases of the face: angioedema (Quinke's edema), Rossolimo-Melkerlson-Rosenthal syndrome, Sjogren's syndrome, progressive hemiatrophy of the face (Parry-Romberg syndrome).

angioedema (Quinke's edema) – etiology, pathogenesis, clinic, emergency care.

Rossolimo-Melkerson-Rosenthal syndrome – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Sjogren's syndrome – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

progressive hemiatrophy of the face (Parry-Romberg syndrome) – etiology, pathogenesis, clinic, diagnosis, principles of treatment.

Topic 16.

Instrumental methods of investigation in neurology: ultrasound (USD, Echo-ES), methods of neuro visualization (CT, MRI of the brain), electro physiological (EEG, ENMG).

Physical principles used in various research methods.

Indications for various instrumental methods of diagnosis in the study of the nervous system.

Contraindications to some instrumental research methods.

Interpretation of the results of various research methods in normal and pathological conditions.

4. Structure of the academic discipline

Names of content modules and topics	Number of hours					
	total	including				
		l	p	lab.	ind	i.w.
1	2	3	4	5	6	7
Content module 1. Neurology, including neurostomatology						
Topic 1. Pathology of sensation function of the Nervous system. Classification of sensation. Methods of sensory function examination. Types and kinds of sensory disorders.	5		4			1

Topic 2. Pathology of coordination function of the Nervous system. Types of ataxias.	2		1			1
Topic 3. Pathology of reflex-motor function of the Nervous system. Methods of reflex-motor system examination. Central and peripheral paralyses.	5		4			1
Topic 4. Pathology of I, II, III, IV, VI cranial nerves Methods of vision fields and eye-balls movements examination. Vegetative innervation of eye. Syndromes of somatic and autonomic innervation of eye.	2		2			
Topic 5. Pathology of V, VII, VIII cranial nerves. Methods examination of sensation on face and movements of mimic muscles.	3		2			1
Topic 6. Pathology of IX-XII cranial nerves. Methods of examination of IX-XII cranial nerves. Bulbar and pseudo-bulbar syndrome.	3		2			1
Topic 7. Neurostomatological diseases. Prosopalgias of neuropathic genesis. Neuralgia of trigeminal and glossopharyngeal nerve. Principles of treatment.	4	2	2			
Topic 8. Pathology of Autonomic nervous system. Vegetative prosopalgias. Principles of treatment.	2		2			
Topic 9. Prosopalgias of other geneses (muscular, vessel, somatic, psychogenic). Giant-cell arteritis. Myo-fascial pain syndrome of face. Principles of treatment.	3	1	2			
Topic 10. Meningeal syndrome. Secondary purulent meningitis. Principles of diagnostics. Emergency care.	3		2			1
Topic 11. Ischemic and hemorrhagic strokes. Principles of diagnostics. Emergency care.	3		2			1
Topic 12. Epilepsy. Epileptic status. Clinics. Emergency care. Non-epileptic paroxysmal states: clinics, Emergency care.	3		2			1

Topic 13. Types of headaches.	1	1				
Topic 14. Disturbance of consciousness in clinic of nervous diseases.	1	1				
Topic 15. Other neurogenic diseases of the face: angioedema (Quinke's edema), Rossolimo-Melkerlson-Rosenthal syndrome, Sjogren's syndrome, progressive hemiatrophy of the face (Parry-Romberg syndrome).	1	1				
Topic 16. Instrumental methods of investigation in neurology: ultrasound (USD, Echo-ES), methods of neuro visualization (CT, MRI of the brain), electro physiological (EEG, ENMG).	2					2
Final control	2		2			
Together according to content module 1	45	6	29			10

5. Topics of the lectures

No	Topic of lecture	Number of hours
1	Neurostomatological diseases caused by damage to the trigeminal nerve system	1
2	Neurostomatological diseases with damage to vegetative nodes, facial nerve and nerves of the bulbar group	1
3	Facial pain of other genesis	1
4	Types of headaches	1
5	Disturbance of consciousness in clinic of nervous diseases	1
6	Other neurogenic diseases of the face	1
Total		6

6. Topics of seminar classes

Seminar classes are not provided.

7. Topics of practical classes

Day of class	Class number	Topics of lessons	Number of hours
I	1.	Pathology of sensation function of the Nervous system. Classification of sensation. Methods of sensory function examination. Types and kinds of sensory disorders.	4

	2.	Pathology of coordination function of the Nervous system. Types of ataxias.	1
II	3.	Pathology of reflex-motor function of the Nervous system. Methods of reflex-motor system examination. Central and peripheral paralyses.	4
	4.	Pathology of I, II, III, IV, VI cranial nerves Methods of vision fields and eye-balls movements examination. Vegetative innervation of eye. Syndromes of somatic and autonomic innervation of eye.	2
III	5.	Pathology of V, VII, VIII cranial nerves. Methods examination of sensation on face and movements of mimic muscles.	2
	6.	Pathology of IX-XII cranial nerves. Methods of examination of IX-XII cranial nerves. Bulbar and pseudo-bulbar syndrome.	2
	7.	Neurostomatological diseases. Prosopalgias of neuropathic genesis. Neuralgia of trigeminal and glossopharyngeal nerve. Principles of treatment.	2
IV	8.	Pathology of Autonomic nervous system. Vegetative prosopalgias. Principles of treatment.	2
	9.	Prosopalgias of other geneses (muscular, vessel, somatic, psychogenic). Giant-cell arteritis. Myo-fascial pain syndrome of face. Principles of treatment.	2
	10.	Meningeal syndrome. Secondary purulent meningitis. Principles of diagnostics. Emergency care.	2
V	11.	Ischemic and hemorrhagic strokes. Principles of diagnostics. Emergency care.	2
	12.	Epilepsy. Epileptic status. Clinics. Emergency care. Non-epileptic paroxysmal states: clinics, Emergency care.	2
VI	13.	Final control	2
Total			29

8. Topics of laboratory classes

Laboratory classes are not provided.

9. Independent work

No	Topic	Number of hours	Type of control
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1.	Preparation for practical classes – theoretical preparation and development of practical skills. Students perform the tasks outside of classroom time, making appropriate entries in the workbook.	8	Current control in practical classes
2.	Instrumental methods of investigation in neurology: ultrasound (USD, Echo-ES), methods of neuro visualization (CT, MRI of the brain), electro physiological (EEG, ENMG).	2	Final control
Total		10	

10. Individual tasks.

List of individual tasks (individual independent work -IIW)

Writing individual independent work on topics:

1. Neurogenic diseases of the tongue.
2. Herpetic stomatitis.

Points for individual assignments are awarded to the student only under the conditions of their successful completion and defense. A student has opportunity to write one IIW per academic course in the discipline «Neurology, including neurostomatology».

11. Methods of education

Traditional methods of learning: verbal, visual, practical.

Methods of educational and cognitive activity: explanatory and illustrative method, reproductive method, method of problem presentation, partial search or heuristic method, research method.

Methods of stimulation and motivation of educational and cognitive activity: inductive and deductive methods of learning, methods of stimulation and motivation of learning.

Control methods as teaching methods (control by the teacher, self-control, mutual control, self-correction, mutual correction).

12. Methods of control

Current control is carried out during the study of a specific topic to determine the level of formation of a separate skill or ability, the quality of assimilation of a certain portion of the educational material by observing the educational and cognitive activity of students in classes, oral survey, written control of knowledge and skills with the help of written works (written answers to questions, essays, solving situational problems, etc.) and test control using a set of standardized tasks. The final evaluation provides a summary of the results of the current control and final examination.

Forms of control.

Forms of control and the evaluation system are carried out in accordance with the requirements of the program of the discipline, “Regulations on the procedure for assessing students’ knowledge during the current and final control of the discipline at

O.O.Bogomolets National Medical University”, approved by the Academic Council (protocol No.1 dated September 5, 2019); “Regulations on the distance form of education at the O.O.Bogomolets National Medical University” dated 28.02.20; “Instructions for evaluating the educational activity of students when working in the NEURON platform” (NMU, Kyiv, 2020); Methodical recommendations for work on the LIKAR_NMU distance learning platform, approved by the decision of the Academic Council of the University, protocol No.10 dated April 1, 2021.

After the end of the course, the student is allowed to take the final examination if he has fully completed the course program: he has no negative grades and missed practical classes and lectures no more than 25% of the total number, practical skills have been worked out, all protocols of practical classes have been drawn up, topics for independent processing have been studied.

The grade for course is defined as the sum of the grades of the current educational activity (in points) and the assessment of the final control (in points), which is assigned when evaluating theoretical knowledge and practical skills in accordance with the list determined by the discipline program.

Evaluation criteria for oral and written answers for classroom and distance education:

Current lecture courses, current, final control of students’ knowledge are conducted by distance learning.

When mastering each topic of the course for the current educational activity, the student is given grades remotely on LIKAR_NMU platform on a traditional 5-point scale, which are then converted into the points depending on the number of topics in the module. The program uses the following system of converting the traditional evaluation system into points:

<i>Traditional mark</i>	<i>Conversion into points</i>
“5”	15
“4”	13
“3”	9
“2”	0

Distribution of points received by students.

VII or VIII semester	Number of days / practical classes	Conversion of marks into points					The maximum number of current points
		Traditional marks/points				Points for individual work	
		«5»	«4»	«3»	«2»		
For current learning activity	5/12	15	13	9	0	5	80

The maximum number of points that a student can score while studying the module is calculated by multiplying the number of points corresponding to the grade “5” by the number of training days in the module (15x5) with the addition of points for individual independent work (5) and is equal to 80 points.

Evaluating of individual independent work (IIW):

Number of points for individual independent work of student (IIW) depends on its volume and significance, but no more than 5 points. These points are added to the sum of points scored by the student for the current educational activity. Points for individual assignments are awarded to the student only under the conditions of their successful completion and defense. A student has the opportunity to write one IIW per course in the discipline of neurology, including neurostomatology.

Final control is carried out remotely of identifying the skills and knowledge formed by students in the discipline “Neurology, including neurostomatology” for the entire period of studying the discipline Web-services (Skype, Zoom, Viber, etc) are used during the final inspection.

Evaluation of the results of the final control is carried out according to the 200-point knowledge control system. When assigning a grade for a discipline, the number of points for the current study which are accumulated by the student (**maximum number of points 80**) and the result of passing of the final control in points (**maximum number of points 120**) are taking into account. At the same time, in order to receive credit for the discipline, the total number of points received by the student must be not less than the minimum, which is determined by the working study program for the discipline and corresponds to the minimum value of the grade **E**, and therefore is **111** points.

Final control’s regulations, including in a mixed form of education

with the questions, which was discussed at the methodical meeting of the department of neurology and made public before the start of training (website, stand).

FC is held according to the specified schedule and includes 2 stages:

- Performance of test tasks (40 questions) – conducted at the last practical session or on the LIKAR_NMU platform;
- Answers to 2 questions of the oral survey: 1st – general neurology; 2nd – neurostomatology.

In order to objectify the control of students' knowledge, the oral questioning is video-recorded. Topics covered in lectures, discussed in practical classes, and recommended for independent study are included in the test tasks and oral survey. The complex number of points that a student gets based on the results of the final control has the following components: based on the results of the written test control and answer to 2 questions of the oral survey.

Based on the results of the written test control (40 questions), the student receives:

- 60 points – if he gave at least 98%, 40 correct answers;
- 40 points – if he gave at least 67%, 27 correct answers;
- 20 points – if he gave at least 33%, 13 correct answers;
- 0 points – if he gave less than 2/5%, 1 correct answer.

120 points (for theory 30+30 and for tests 60) are awarded to the student – if he has demonstrated comprehensive, systematic and keep knowledge of the curriculum material, the ability to freely perform practical tasks provided for by the neurology, including neurostomatology program, mastered the basic and is familiar with additional literature recommended by the department; correctly completed all planned practical work, was able to analyze and interpret research results and draw reasoned conclusions, and also gave correct answers to at least 90% situational problems, theoretical questions and other integrated problems.

86 points (for theory 23+23, and for tests 40) are awarded to the student - if he showed full knowledge of the educational program material in neurology, including neurostomatology, successfully completes the practical tasks provided by the discipline program, learned the literature recommended by the program, completed all planned practical work, managed to analyze and interpret research results and draw reasoned conclusions, and also gave correct answers to at least 80% of situational problems, theoretical questions and of the integrated tasks;

56 points (for theory 18+18, and for tests 20) are awarded to the student - if he showed sufficient knowledge of the educational program material in neurology, including neurostomatology, while answering the questions during the oral survey, made minor mistakes, successfully performed the practical tasks prescribed by the discipline program, correctly performed all the planned practical work and managed to analyze and interpret the results of research and draw reasoned conclusions, and also gave correct answers to at least 60% of situational problems, theoretical questions and of the integrated problems;

0 points (for theory 0+0, and for tests 0) are awarded to the student in the answers of whom insufficient knowledge of the basic material from the educational discipline of neurology, including neurostomatology, was revealed; who makes fundamental mistakes when performing the practical tasks provided by the program; who did not acquire theoretical knowledge and did not master practical skills within the mandatory minimum, without which the student cannot get a satisfactory grade during the final control, if he did not complete all the planned practical work and was not able to analyze and interpret research results and draw reasoned conclusions, did not give correct answers to situational problems and theoretical questions.

Students who did not pass the final control for a positive evaluation, and who were not admitted to FC, after proper preparation, can retake FC on another day according to a special schedule determined by the educational department.

Calculation of points for the final control of the discipline «Neurology, including neurostomatology»

FC component corresponds to the mark	Tests	Theory question 1	Theory question 2	Total
5	60	30	30	120
4	40	23	23	86
3	20	18	18	56
2	0	0	0	0

ASSESSMENT OF KNOWLEDGE IN THE DISCIPLINE IS CARRIED OUT ACCORDING TO THE APPROPRIATE SCALE:

Score in points	Score at national scale	Score at ECTS scale	Explanation
170-200	Perfectly	A	Perfectly (excellent performance with only minor errors)
155-169		B	Very good (above average with few errors)
140-154		C	Good (generally correct execution with some significant errors)

125-139	Satisfactory	D	Satisfactory (not bad, but with a significant number of flaws)
111-124		E	Sufficient (performance meets minimum criteria)
60-110	Unsatisfactory	FX	Unsatisfactory (with the possibility of reassembly)
1-59		F	Unsatisfactory (with mandatory repeated study of the discipline)

Course policy: compulsory observance of academic integrity by students, namely:

- Independent performance of all types of work, tasks, forms of control provided by the work program of the educational discipline «Neurology, including neurostomatology»;
- References to sources of information in case of using ideas, developments, statements, information;
- Compliance with the legislation on copyright and related rights;
- Provision of reliable information about the results of one's own educational (scientific, creative) activities, use of research methods and sources of information.

List of questions for the final control in the discipline «Neurology, including neurostomatology» for IV-year students of the Faculty of Dentistry

1. Classification of sensation.
2. Kinds and types of sensory disorders.
3. Physiological reflexes. Classification. Structure of reflex arc.
4. Pathological reflexes, their role at topical diagnosis.
5. Central and peripheral paralysis. Differential diagnostics.
6. Cerebellar functions. Symptoms of its damage. Types of ataxias.
7. Disorders of oculomotor group of cranial nerves.
8. Vegetative innervation of eye. Syndrome of Bernard-Horner.
9. Bulbar and pseudobulbar syndrome.
10. Epilepsy. Classification, diagnostics. Status epilepticus, its treatment.
11. Transient ischemic attack. Clinic, diagnosis, principles of treatment.
12. Ischemic stroke. Pathogenesis, clinic, diagnostics, emergency.
13. Hemorrhagic stroke. Pathogenesis, clinic, diagnostics, emergency.
14. Meningeal syndrome. Symptoms and diagnostic principles.
15. Structure of cerebrospinal fluid: normal and in case of meningitis, tumors, hemorrhage.

- 16.Meningitis. Clinic, diagnostics, treatment.
- 17.Types of headaches: diagnosis, principles of treatment.
- 18.Impairment of consciousness: classification, diagnosis, emergency care.
- 19.Systematization of neurostomatological diseases.
- 20.Neuralgia of glossopharyngeal nerve. Clinic, diagnostics, treatment.
- 21.Neuralgia of trigeminal nerve. Clinic, diagnostics, treatment.
- 22.Neuropathy of trigeminal nerve. Clinic, diagnostics, treatment.
- 23.Neuropathy of facial nerve. Clinic, diagnostics, treatment.
- 24.Neuropathy of lower alveolar nerve. Clinic, diagnostics, treatment.
- 25.Neuropathy of lingual and mental nerves. Clinic, diagnostics, treatment.
- 26.Postherpetic trigeminalgia. Clinic, diagnostics, treatment.
- 27.Neurostomatological diseases with damages of vegetative ganglions.
- 28.Odontogenic prozopalgia. Clinic, diagnostics, treatment.
- 29.Iatrogenic damages of trigeminal nerve.
- 30.Myo-fascial pain syndrome of face. Clinic, diagnostics, treatment.
- 31.Temporal (giant cells) arteritis. Clinic, diagnostics, treatment.
- 32.Psychogenic facial pain. Stomalgia, glossalgia.
- 33.Angioedema: diagnosis, emergency care.
- 34.Sjogren's syndrome: clinic, diagnosis, principles of treatment.

13. Methodological provision of a mixed form of education

The content of specialists training is determined by the system of educational and methodical documents developed at the University and agreed upon in the established order for the specialty (educational and methodical complex of the specialty - EMCS) and for individual disciplines (educational and methodical complex of the discipline - EMCD).

EMCS includes: the concept of specialist training; educational and qualification characteristics; educational and professional programs; educational plans; working training programs of disciplines.

EMCD includes: the program of the discipline, the working training program of the discipline; plans for seminar classes; tasks for independent work of students; the knowledge control system (list of questions for assessment, evaluation criteria, regulations for conducting assessment in the discipline); list of program questions; list of recommended literature.

Methodological support materials for classroom-distance learning in two languages (Ukrainian, English) are available on the department's website (at <https://nmuofficial.com/zagalni-vidomosti/kafedri/kafedra-nevrologiyi/informatsiya-dlya-studentiv/>,

https://docs.google.com/document/d/16tcJdA_yqfMqXOv9ZhmNx8ckPjKkLZPv/edit).

The video-content of streaming lectures has been uploaded to the Likar platform (<https://likar.nmuofficial.com/md/course/view.php?id=1119>).

14. Recommended literature

Basic:

1. Neurology: textbook for students in higher education institutions IV level of accreditation that master academic subjects in English / ed. by L. Sokolova, I. A. Hryhorova. - Vinnytsya : Nova Knyha Publishers. 2017. 624 p.
2. Neurology: Textbook for stud. of higher med. Institutions // L. Sokolova, O. Myalovitska, V. Krylova, T. Illash, V. Melnyk; ed. by Prof. L. Sokolova. Vinnytsia: Nova Knyha. 2012. 275 p.
3. Neuroscience for Dentistry / Barbara J. O'Kane, Laura C. Barritt. New York: Thieme. 2022, 520p. <https://doi.org/10.1055/b000000365>

Auxiliary:

1. Bendtsen et Al EAN Guideline on Trigeminal Neuralgia // European Journal of Neurology, EAN Guidelines/CME Article, 2020. P.831-849.
2. Lysenyuk V, Simonenko G. Course of Neurology Diseases (for students of stomatological faculty). V.1-2. Kyiv. 2011. 163 p.
3. Mumenthaler M., Heinrich Mattle, Fundamentals of Neurology.- Thieme, 2006.-306 p.

15. Information resources

1. Official online representation of the President of Ukraine
<http://www.president.gov.ua/>
2. Verkhovna Rada of Ukraine <http://www.rada.gov.ua/>
3. Cabinet of Ministers of Ukraine <http://www.kmu.gov.ua/>
4. Ministry of Education and Science of Ukraine <http://www.mon.gov.ua/>
5. Ministry of Ecology and Natural Resources of Ukraine <http://www.menr.gov.ua/>
6. State Service of Ukraine for Emergency Situations <http://www.dsns.gov.ua/>
7. National Security and Defense Council of Ukraine <http://www.rnbo.gov.ua/>
8. Permanent Mission of Ukraine to the UN <http://ukraineun.org/>
9. North Atlantic Alliance (NATO) <http://www.nato.int/>
10. World Health Organization <http://www.who.int/en/>
11. Department of neurology NMU
<https://nmuofficial.com/zagalni-vidomosti/kafedri/kafedra-nevrologiyi/>