

Odessa National Medical University
Medical Faculty
Department of Neurology and Neurosurgery

Course Syllabus
«NEUROLOGY»

Volume	120 hours (4,0 credits)
Semester, Year of study	7 and 8 semesters, 4 year students
Days, time, place	Conducting a discipline occurs according to the approved schedule of classes Clinical bases of the department: Odessa Regional Hospital
Teachers	Д.мед.н., професор Сон Анатолій Сергійович Д.мед.н., професор Стоянов Олександр Миколайович Д.мед.н., доцент Муратова Тетяна Миколаївна К.мед.н., доцент Горанський Юрій Іванович К.мед.н., доцент Лебідь Олена Павлівна К.мед.н., доцент Перькова Гана Василівна К.мед.н., доцент Добровольський Василь Вячеславович К.мед.н., доцент Герцев Василь Миколайович К.мед.н., доцент Чемересюк Іна Гергіївна К.мед.н., доцент Солодовнікова Юлія Олександрівна К.мед.н., доцент Хубєтова Ірина Віліївна К.мед.н., доцент Сергєєва Маріна Юріївна К.мед.н., асистент Храмцов Денис Миколайович К.мед.н., асистент Олійник Світлана Михайлівна Асистент Колесник Олена Олександрівна Асистент Марусіч Тетяна Сергіївна Асистент Іванюк Аліна вікторівна Асистент Прокопюк Анастасія Олександрівна
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Workplace	Clinical bases of the department: Odessa Regional Hospital
Counseling	Online consultations are carried out using the MS Teams Platform, ZOOM by pre-arrangement

COMMUNICATION

Depending on the form of training (distance or auditorium) communication with students will be carried out using e-mail, social networks, telephone, eye meetings

COURSE ANNOTATION

Description of the discipline

The subject of study of the discipline "Neurology" is: the regularity of the functioning of the nervous system; features of clinical manifestations, topical diagnosis and principles of treatment of diseases of the nervous system.

Interdisciplinary connections

Neurology, as a science, is closely related to other fundamental medical disciplines and:

a) is based on the study of human anatomy; histology, biochemistry, physiology, pathomorphology; pathophysiology; internal medicine, pediatrics, pharmacology and integrates with these disciplines, etc .;

b) lays the foundations for students to study diseases of the nervous system arising in the clinic of internal medicine, pediatrics, surgery, traumatology and orthopedics, neurosurgery, urology, obstetrics and gynecology and other disciplines, which integrates teaching with these disciplines and skills to apply knowledge in the process further training and professional activity;

c) provides an opportunity to gain practical skills and develop professional skills for the diagnosis of diseases of the nervous system and the provision of emergency medical care for certain pathological conditions.

The purpose of teaching the discipline "Neurology" is to improve knowledge in the diagnosis, treatment and prevention of diseases of the nervous system

The main tasks of studying the discipline "Neurology" are:

- mastering the knowledge of the structure, functioning, diagnosis of clinical manifestations of disorders, principles of treatment and prevention of diseases of the nervous system;
- acquisition of skills and abilities for examination of the patient and registration of results in the relevant medical documentation;
- formation of moral and ethical and deontological qualities in professional communication with the patient.

The discipline provides students with the acquisition of competencies:

integrated: the ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care or in the learning process, which involves research and / or innovation and is characterized by complex and uncertain conditions and requirements.

general:

1. ability to abstract thinking, analysis and synthesis;

2. the ability to learn and master modern knowledge;
3. ability to apply knowledge in practical situations;
4. ability to plan and manage time;
5. knowledge and understanding of the subject area and understanding of professional activity;
6. skills of using information and communication technologies;
7. ability to adapt and act in a new situation;
8. ability to make informed decisions;
9. ability to work in a team;
10. interpersonal skills;
11. determination and persistence in terms of tasks and responsibilities;
12. desire to preserve the environment;
13. ability to act on the basis of ethical considerations.

special (professional, subject):

1. collecting medical history of the patient;
2. conducting an objective examination of the patient;
3. assessment of the severity of clinical manifestations of the disease;
4. drawing up a survey plan and evaluating their results;
5. differential diagnosis;
6. providing care for the patient;
7. identify and assess acute medical conditions;
8. first aid;
9. appointment of appropriate treatment;
10. knowledge of protocols for providing care for various types of emergencies in patients.

Detailing of competencies according to NQF descriptors in the form of "Competence Matrix".

Learning outcomes:

Integrative final program learning outcomes, the formation of which is facilitated by the discipline:

- ability to conduct professional activities in social interaction based on humanistic and ethical principles;
- ability to identify future professional activity as socially significant for human health;
- ability to use knowledge and understanding of the subject area and understanding of the profession;
- ability to show knowledge in practical situations;
- ability to use the results of independent search, analysis and synthesis of information from various sources to solve typical problems of professional activity;
- ability to argue information for decision-making, to be responsible for them in standard and non-standard professional situations;

- understanding and adherence to the principles of deontology and ethics in professional activities;
- understanding of the norms of the sanitary-epidemic regime and safety requirements in carrying out professional activities;
- understanding of self-regulation and leading a healthy lifestyle, the ability to adapt and act in a new situation;
- ability to be aware of the choice of communication strategy, interpersonal skills;
- ability to adhere to the norms of communication in professional interaction with colleagues, management, to work effectively in a team;
- ability to communicate effectively, form and solve problems in the native language both orally and in writing;
- ability to use some information and communication technologies;
- ability to analyze and evaluate the results of research, age, sex, individual characteristics of the human body, clinical anatomy of human body parts, organs and other anatomical formations;
- collect, interpret relevant data and analyze complexities within a specialization to make judgments that address social and ethical issues;
- understanding the desire to preserve the environment;

Learning outcomes for the discipline:

Know:

- symptoms of central and peripheral paresis.
- motor disorders with motor pathway lesions at different levels.
- anatomical and physiological, biochemical data of the extrapyramidal system and syndromes of its defeat.
- anatomical and physiological features of the cerebellum and syndromes of its defeat.
- clinical classification of sensitivity, types of sensitive disorders, topical types of sensitive disorders.
- anatomical and physiological features and pathology of cranial nerves.
- pathology of the autonomic nervous system.
- syndromes of lesions of the cerebral cortex.
- changes in cerebrospinal fluid and meningeal symptom complex.
- anatomical features of blood supply to the brain and spinal cord.
- principles of classification of vascular diseases of the brain.
- principles of undifferentiated (basic) and differentiated treatment of strokes.
- principles of prevention of acute cerebrovascular disorders.
- modern classification of epileptic and non-epileptic paroxysmal states.
- the main types of cephalgia and tactics of their treatment.
- modern ideas about the mechanisms of action of chemical and physical agents on the nervous system.
- principles of classification of infectious diseases of the nervous system.
- clinic of the main nosological forms of infectious diseases.

- manifestations of nervous system damage in the presence of HIV infection.
- modern aspects of etiopathogenesis, clinical forms, treatment of demyelinating diseases.
- principles of formation of vertebrogenic and nonvertebrogenic diseases of the peripheral nervous system.
- clinical features of perinatal lesions of the nervous system.
- neurological manifestations of hereditary-degenerative diseases of the neuromuscular, extrapyramidal, pyramidal, cerebellar systems.
- neurological syndromes in diseases of internal organs, paraneoplastic syndromes.
- congenital defects of the spine and spinal cord.
- groups of drugs used in patients with a neurological profile.

Be able to:

- diagnose paresis and paralysis. Identify signs of central and peripheral paresis.
- diagnose sensitivity disorders.
- diagnose meningeal syndrome and determine the indications for lumbar puncture.
- identify signs of bulbar syndrome.
- diagnose symptoms of oculomotor, trigeminal and facial nerves.
- conduct coordination tests. Diagnose the symptoms of cerebellar lesions.
- diagnose speech disorders.
- diagnose status epilepticus and provide emergency care.
- diagnose neurological manifestations of traumatic brain and spinal cord injury.
- to examine patients, formulate a preliminary and make a differentiated diagnosis of neurological diseases.
 - to interpret neuroimaging, ultrasound and electrophysiological methods of examination of neurological patients.
 - to make schemes of treatment, prevention of diseases of a nervous system.

COURSE DESCRIPTION

The course will be taught in the form of lectures (10 hours) and practical classes - 70 hours, the organization of independent work of students - (40 hours).

Types of educational activities of students according to the curriculum are: lectures, practical classes, independent work (VTS) with active consultation of the teacher.

Content, scope and structure of the discipline "Neurology"

Thematic plan of lectures

1. Introduction to neurology. Principles of structure and functions of the nervous system. Symptoms of central and peripheral paresis. Syndromes of motor pathway lesions at different levels. Automated involuntary movements. Coordination of movements. Extrapyramidal system and syndromes of its defeat.

2. Higher brain functions and their disorders. Localization of functions in the cerebral cortex and lesion syndromes.

3. Vascular diseases of the brain and spinal cord.
4. Paroxysmal conditions in the clinic of nervous diseases. Neurological aspects of traumatic brain injury.
5. Demyelinating diseases of the nervous system

Thematic plan of practical classes

1. Principles of structure and functioning of the nervous system. The functional unit of the nervous system is a neuron. Motor system. Representation of reflex and reflex arc.
2. Arbitrary movements and their violations. Pyramid system. Cortico-nuclear and cortico-spinal pathways.
3. Symptoms of central and peripheral paresis. Topic 4. Automated involuntary movements. Coordination of movements. Extrapyramidal system and syndromes of its defeat.
5. Cerebellum, syndromes of cerebellar lesions.
6. Sensitive system and symptoms of its defeat. Types and types of sensitivity disorders.
7. Cranial nerves I, II, VIII and syndromes of its defeat.
8. Cranial nerves III, IV, VI and syndromes of their defeat.
9. Cranial nerves V, VII and syndromes of their defeat.
10. Cranial nerves IX, X, XI, XII and syndromes of their defeat. Bulbar and pseudobulbar syndromes. Alternating syndromes.
11. Autonomic nervous system. Methods of research of the autonomic nervous system. Pathology of the autonomic nervous system.
12. Localization of functions in the cerebral cortex. Defeat syndromes.
13. Cerebrospinal fluid, its changes. Meningeal syndrome.
14. Functional diagnosis of diseases of the nervous system.
15. Blood supply to the brain and spinal cord.
16. Practical skills.
17. Vascular diseases of the brain and spinal cord. Chronic cerebrovascular disorders.
18. Ischemic stroke. Transient ischemic attack.
19. Hemorrhagic stroke.
20. Epilepsy and non-epileptic paroxysmal conditions.
21. Headache. Sleep and vitality disorders.
22. Occupational and domestic neurointoxication. Defeat of the nervous system under the influence of physical factors.
23. Neurological aspects of traumatic brain injury. Spinal cord injury.
24. Meningitis.
25. Arachnoiditis. Encephalitis.
26. Poliomyelitis. Acute myelitis. Amyotrophic lateral sclerosis.
27. Neurosyphilis. Early and late forms.
28. Lesions of the nervous system in the presence of HIV infection.
29. Tuberculosis of the nervous system.
30. Demyelinating diseases of the nervous system.

31. Structure and functions of the peripheral nervous system. Symptoms of nerve tension.
32. Diseases of the peripheral nervous system. Paraneoplastic polyneuropathy, palliative treatment.
33. Somatoneurological syndromes.
34. Hereditary and degenerative diseases of the nervous system.
35. Practical skills.

List of recommended reading

Main literature:

1. Неврологія : нац. підручник для студ. вищ. мед. навч. закл. IV р. акред. / за ред. І.А. Григорової [Григорова І.А., Соколова Л.І., Герасимчук Р.Д., Гриб В.А., Дзяк Л.А., Козьолкін О.Я.]. - К. : Медицина, 2015. - 640с. 2 - друге вид., виправлене.
2. Топічна діагностика патології нервової системи. Алгоритми діагностичного пошуку. Шкробот С.І., Салій З.В., Бударна О.Ю. Укрмедкнига, 2018. – 156с.
3. Методи обстеження неврологічного хворого: навч. Посібник / за ред. Л.І.Соколової, Т.І.Ілляш. К., 2015. – 144 с.
4. Медицина невідкладних станів. Екстрена(швидка) медична допомога: підручник / І.С. Зозуля, В.І. Боброва, Г.Г. Рошин та інші / за ред. І.С. Зозулі. - 3-є видання, пер. та доп. - Київ. - ВСВ «Медицина», 2017. – 960с.
5. Негрич Т.І., Боженко Н.Л., Матвієнко Ю.Щ. Ішемічний інсульт: вторинна стаціонарна допомога: навч. посіб. Львів: ЛНМУ імені Данила Галицького, 2019. - 160с.
6. «Загальна та спеціальна неврологія» // Навчально-методичний посібник для студентів 4-го курсу медичного факультету, ОНМедУ, 2017 р.- 337с.
7. Neurology - Неврологія: textbook / І.А. Hryhorova, L.I. Sokolova, R.D. Herasymchuk et al.; edited by І.А. Hryhorova, L.I. Sokolova. – Kyiv : AUS Medicine Publishing, 2017. – 624р.

Additional literature:

- Неврологія : підручник для вищ. навч. закл. I-III р. акред. / Т. І. Кареліна, Н. М. Касевич ; за ред. Н. В. Литвиненко. - 2-ге вид., виправлене. - К. : Медицина, 2017. - 288с.
- Актуальные вопросы неврологии/под. ред. В.Л. Голубева. М.: МЕДпрессинформ, 2019. - 488с.
- Боженко М.І.,Негрич Т.І.,Боженко Н.Л.,Негрич Н.О. Головний біль. Навчальний посібник.- К.: Видавничий дім Медкнига,2019.-48с.
- Неврология: национальное руководство / под. ред. Е.И. Гусева, А.Н. Коновалова, В.И. Скворцовой. 2-е узд., перераб. и доп. М.: ГЕОТАР-Медиа, 2018. - Т.1. - 880с.
- Мисулис К.Є., Хед Т.К. Справочник по неврологии Неттера / пер.с англ.. М.: МЕДпрессинформ, 2019. - 608с.
- Гудфеллоу Д.А. Обследование неврологического больного / пер.с англ.: под ред. В.В. Захарова. - М.: ГЕОТАР-медиа, 2017. - 208с.

EVALUATION

Evaluation of current educational activities

The current educational activity of the student is evaluated on a 4-point (traditional) scale. Assessment of the learning activities of all students is not mandatory at every lesson. However, at least 50% of students must be interviewed in a practical session. At the end of the course, the current performance is calculated as the average score of all grades obtained by the student on the traditional scale, rounded to 2 (two) decimal places.

Assessment of students' independent work (IWS), which is provided by the topic of the lesson along with the classroom work, is assessed during the current control of the topic in the relevant lesson. Assimilation of topics that are submitted only for independent work is checked during the exam.

Exam

Upon completion of the discipline is an exam. Only those students who do not have academic debts and have an average score of at least 3.00 for current academic activities are allowed to take the final attestation. The exam is graded on a 4-point (traditional) scale.

Evaluation of discipline

The assessment of the discipline consists of two components:

- 50% - current performance (arithmetic mean of all student grades);
- 50% grade on the exam.

Thus, the department puts two assessments in the statement:

- 1). the arithmetic mean of all current estimates (calculated as a number rounded to 2 (two) decimal places, for example, 4.76);
- 2). traditional grade for the exam.

The average score for the discipline (traditional grade) is calculated as the arithmetic mean of current performance and examination grade.

COURSE POLICIES

Deadline and cross plating. All missed classes should be spent. Lectures are worked out by writing abstracts on the topic of the class. Practical classes are worked out in accordance with the schedule of consultations.

Students have the right to transfer current unsatisfactory ratings in order to achieve the average current score of 3.00.

Policy for academic integrity: unacceptable writing, student must fluent material.

Policies for visiting classes and delay: student should not miss lecture and practical classes, about the absence of valid reasons, it is necessary to inform the dean's office, which issues permits to work out missed, delayed not desirable.

Mobile devices: Invalid use of a mobile phone, tablet or other mobile devices during class (except in cases provided for by the curriculum and methodological recommendations of the teacher).

Behavior in the audience: creative, business, benevolent atmosphere.