Odessa National Medical University Department of Neurology and Neurosurgery

Syllabus of the academic discipline "Neurology"

Amount	12 credits / 360 hours
Semester, year teaching	III-IV semester, 2 year of study
Days, time, place	According to the schedule in the neurology and neurosurgery classroom. St. Tinista, 8
Teacher(s)	Son Anatoliy Serhiyovych , MD, PhD, professor, head of the department of neurology and neurosurgery, Solodovnikova Yulia Oleksandrivna, MD, PhD, associate professor of the department of neurology and neurosurgery
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Workplace	Office of the head of the department of neurology and neurosurgery. St. Tinista, 8
Consultations	*Face-to-face consultations* : Tuesday - from 2:00 p.m. to 4:00 p.m.; Thursday - from 9:00 a.m until 13.00 *Online consultations:* Tuesday - from 14.00 to 16.00; Thursday - from 9.00 to 13.00 *Microsoft Teams* or by *Telegram/Viber*

COMMUNICATION

Communication with graduate students is carried out by face-to-face meetings. In the case of transition to distance learning, communication with graduate students will be carried out using e -mail and programs: Microsoft Teams, Telegram and Viber.

ANNOTATION COURSE

Subject study disciplines

The subject of studying the academic discipline "Neurology" are the diseases of the nervous system.

Course prerequisites and post-requisites (The place of the discipline in the educational program)

The study of the academic discipline "Neurology" is based on previous (providing) disciplines: "Neurology" (study course), "Neurosurgery" (study course), as well as specialty disciplines.

The purpose of the course

The purpose of teaching the academic discipline "Neurology" is to acquire and deepen a set of knowledge, abilities, skills and other competencies sufficient for the production of new ideas, solving complex tasks from this discipline, mastering the methodology of scientific and pedagogical activities, as well as conducting one's

own scientific research. which solves an actual scientific task in neurology, the results of which have scientific novelty, theoretical and practical significance.

Tasks of the discipline:

- identify new scientific directions, theoretical and practical problems in neurology;
- master the terminology of the studied scientific direction; to learn the latest methods of research and treatment in neurology;
- determine the etiological and pathogenetic factors of the most common neurological diseases;
- analyze the typical and atypical clinical picture of the most common neurological diseases, identify their complications;
- draw up a patient examination plan and analyze the data of laboratory and instrumental examinations for the most common neurological diseases and their complications, evaluate the prognosis;
- carry out differential diagnosis, substantiate and formulate the diagnosis of the most common neurological diseases;
- to determine the management tactics (recommendations regarding regimen, diet, treatment) of the patient with the most common neurological diseases and their complications;
- to diagnose and provide medical care for emergency conditions in neurology;
- carry out primary and secondary prevention, rehabilitation for the most common neurological diseases.

Expected results

to the results of the study of the discipline, graduate students have to

know:

- history of development and current state of scientific knowledge in neurology;
- etiology, pathogenesis, classification, clinical manifestations, modern diagnostic standards, differential diagnosis, treatment, emergency care, prevention, prognosis for neurological diseases and their complications;
- modern scientific tasks and problems of neurology.

be able to:

- carry out diagnosis and treatment of the most common neurological diseases in hospital conditions in accordance with National standards and protocols using modern achievements of science and technology;
- perform diagnostic procedures and interpret the results of modern research methods, carry out separate laboratory and instrumental research independently within the scope of scientific work;
- apply medical information technologies and medical literature in the diagnosis and treatment of neurological diseases;
- search the selected scientific research topic in domestic and foreign sources, scientometric databases;
- carry out a critical analysis of modern data, development and synthesis of new ideas on current problems of neurology;
- formulate a goal and scientific tasks on a chosen scientific topic;
- develop research design;

- choose methods of scientific research that are adequate to the set goal and tasks;
- present the obtained data in the form of publications and reports at the national and international level;
- in carrying out the achievements of science and technology in clinical practice.

COURSE DESCRIPTION

Forms and methods of education

The course is taught in the form of lectures (20 hours) and practical classes (160 hours), as well as through the organization of independent work of graduate students (180 hours); total - 360 hours (12 credits).

The study of the discipline is implemented on the basis of the following teaching methods:

- according to the dominant means of education: verbal, visual;
- drawing up graphic schemes;
- solving creative tasks;
- blitz survey;
- performance of written tasks;
- individual control interview;
- logical exercises;
- role-playing (business) games;
- situational tasks ("case method");
- problem-based teaching method, which is aimed at forming students' capacity for dialogue and the ability to defend their own opinion;
- the "brainstorming" learning method, which encourages students to show a creative approach and find alternative methods of solving proposed tasks through free expression of thoughts.

Content of the academic discipline

Topic 1. Anatomical and physiological basis of lesions of the nervous system. Syndromology of lesions of the nervous system.

Topic 2. Examination methods in neurology.

Topic 3. Damage to the peripheral nervous system.

Topic 4. Inflammatory, infectious-inflammatory, infectious-allergic, parasitic and prion diseases of the nervous system.

Topic 5 . Vascular lesions of the nervous system.

Topic 6. Pathology of the autonomic nervous system and neuroendocrine disorders.

Topic 7 . Injuries of the nervous system. Tumors of the nervous system.

Topic 8. Epilepsy and epileptic syndromes.

Topic 9. Sleep and wakefulness disorders. Neurotic disorders.

Topic 10. History of development and current state of scientific knowledge in neurology.

Topic 11. The latest directions of scientific research in neurology.

Topic 12. Modern methods of laboratory diagnostics in neurology.

Topic 13. Modern methods of instrumental diagnostics in neurology.

Topic 14. Evidence-based medicine in modern neurological science.

Topic 15. Comorbidity in neurology as a problem of modern science.

Topic 16. General principles of building a scientific research design in neurology.

Topic 17. Ethics and methodology of scientific research.

Topic 18. Modern approaches to interdisciplinary scientific research.

Topic 19. Peculiarities of teaching neurology in higher medical educational institutions, technology of the pedagogical process.

Topic 20. Management of patients with damage to the peripheral nervous system.

Topic 21. Management of patients with inflammatory, infectious-inflammatory and infectious-allergic diseases of the nervous system.

Topic 22. Management of patients with vascular diseases of the nervous system.

Topic 23. Tactics of therapeutic work for injuries, tumors of the nervous system.

Topic 24. Tactics of managing patients with epilepsy.

Topic 25. Management of patients with neurotic disorders.

Topic 26. Principles and features of the use of physiotherapeutic, psychotherapeutic, etc. treatment methods in neurology.

Topic 27. Rehabilitation measures in neurology. Surgical treatment in the clinic of neurological diseases.

Topic 28. Basic principles and features of the use of pharmacotherapy in clinical practice.

Topic 29. Providing emergency care in comatose states of various genesis.

Topic 30. Providing emergency care for an epileptic fit and status epilepticus.

Topic 31. Crisis situations. Akinetic mutism. Catalepsy. Psychomotor excitement.

Topic 32. Providing emergency care for acute lesions of the brain, spinal cord and peripheral nervous system vascular, infectious-inflammatory, infectious-allergic, degenerative, tumoral, traumatic, intoxication genesis.

Topic 33. Damage to the nervous system in poisoning with toxic, neurotropic substances.

Topic 34. Electric injury, hypothermia and overheating.

Topic 35. Acute neurological pathology in metabolic disorders (diabetes mellitus, kidney, liver, thyroid gland, adrenal gland dysfunction, porphyria, acute pancreatitis, etc.).

Topic 36. Death of the brain.

Topic 37. Neurosyphilis. Early forms (meningovascular syphilis, acute and chronic meningitis, cerebral vascular syphilis, diffuse cerebrovascular syphilis, gum). Late forms (parenchymal syphilis, spinal tuberculosis, progressive paralysis, taboparalysis).

Topic 38. Congenital abnormalities of the nervous system. cerebral palsy

Topic 39. Principles of topical and functional diagnosis of neurological diseases.

Topic 40. Clinical manifestations of diseases of the peripheral nervous system depending on the level of damage.

Topic 41. Slow infections of the nervous system.

Topic 42. Neurological manifestations of rheumatological diseases.

Topic 43. Somatoneurological pathology.

Topic 44. Injuries of the nervous system in childhood. Tumors of the nervous system in children.

Topic 45. Damage to the nervous system after exposure of exogenous environmental factors.

Topic 46. Innovative directions of scientific research in neurology.

Topic 47. Determination of the purpose and tasks of scientific research in neurology.

Topic 48. Use of modern achievements of science and technology when conducting diagnostic research in neurology.

Topic 49. Search for new scientific data expanding the scope of knowledge in the researched problem.

Topic 50. Statistical processing of data in neurological research.

Topic 5 1. Presentation of the obtained data in the form of publications and reports at the national and international level.

Topic 52. Implementation of scientific achievements in neurological practice.

Topic 53. The role of genetic research in modern neurological science.

Topic 54. Scientific and methodological principles of teaching neurology at the pre-diploma stage of education.

Topic 55. Chronic slow neuroinfections (amyotrophic lateral sclerosis, spongiform encephalopathy of Creutzfeldt-Jakob).

Topic 56. Basic accounting medical documentation in health care institutions.

Topic 57. Damage to the nervous system in the presence of HIV infection.

Topic 58. Headache. Syndrome of intracranial hypertension. Syndrome of intracranial hypotension.

Topic 59. Congenital defects of the spine and spinal cord. Syringomyelia.

Topic 60. Differential diagnosis of epileptic and non-epileptic attacks.

Topic 61. Peculiarities of treatment of neurological diseases in childhood and old age.

Topic 62. Principles of emergency diagnosis. Coma of different genesis, their differential diagnosis. Disorders of consciousness and their assessment.

Topic 63. Types of syncopal states. Tactics of a neurologist in syncopal conditions in patients.

Topic 64. Methods of non-pharmacological modulation of epileptic seizures.

Topic 65. Age characteristics of the course of emergency conditions in neurology.

Topic 66. Acute disorders of cerebral blood circulation: transient disorders (cerebral vascular crises and transient ischemic attacks), and strokes (hemorrhagic and ischemic).

Topic 67. Emergency conditions in acute brain lesions of vascular, infectious-inflammatory, infectious-allergic, degenerative, tumor, traumatic, intoxication genesis (clinical manifestations, features of the course, diagnosis and differential diagnosis).

List of recommended literature:

a) main:

1. Неврологія: навчальний посібник / [І.А.Григорова, Л.І. Соколова, Р.Д. Герасимчук, А.С. Сон, та ін.] за редакцією І.А. Григорової, Л. І. Соколової - 3-є видання – Київ, ВСВ «Медицина», 2020 р. – 640 с.

2. Топічна діагностика патології нервової системи. Алгоритми діагностичного пошуку. Шкробот С.І., Салій З.В., Бударна О.Ю. Укрмедкнига, 2018. – 156 с.

3. Методи обстеження неврологічного хворого: навч. посібник / за ред. Л.І.Соколової, Т.І.Ілляш. – 2-ге вид. – Київ: Медицина, 2020. – 143 с.

4. Медицина невідкладних станів. Екстрена(швидка) медична допомога: підручник / І.С. Зозуля, В.І. Боброва, Г.Г. Рощин та інші / за ред. І.С. Зозулі. - 3-е видання, пер. та доп. - Київ. - ВСВ «Медицина», 2017. – 960 с.

5. Негрич Т.І., Боженко Н.Л., Матвієнко Ю.Щ. Ішемічний інсульт: вторинна стаціонарна допомога: навч. посіб. Львів: ЛНМУ імені Данила Галицького, 2019. – 160 с.

b) additional:

1. Боженко М.І., Негрич Т.І., Боженко Н.Л., Негрич Н.О. Головний біль. Навчальний посібник.-К.: Видавничий дім «Медкнига», 2019. – 48 с.

2. Медицина за Девідсоном: принципи і практика: 23-є видання: у 3 томах. Том 1 / за ред. Стюарта Г. Ралстона, Яна Д. Пенмана, Марка В.Дж. Стрекена, Річарда П. Гобсона.- «Медицина», 2020. - 258 с.

3. Медицина за Девідсоном: принципи і практика: 23-є видання: у 3 томах. Том 2 / за ред. Стюарта Г. Ралстона, Яна Д. Пенмана, Марка В.Дж. Стрекена, Річарда П. Гобсона.- «Медицина», 2021. - 778 с

4. Медицина за Девідсоном: принципи і практика: 23-є видання: у 3 томах. Том 3 / за ред. Стюарта Г. Ралстона, Яна Д. Пенмана, Марка В.Дж. Стрекена, Річарда П. Гобсона.- «Медицина», 2021. - 642 с.

c) electronic information resources:

1. Medical Books On-line Library (Neurology) – free download
http://medbookshelf.info/category/neurology/

2. Клінічні настанови з неврології. (Наказ МОЗ України N 487 від 17.08.2007)
https://zakon.rada.gov.ua/rada/show/v0487282-07#Text

3. Міністерство охорони здоров'я України
http://moz.gov.ua

4. Державний експертний центр МОЗ України
www.dec.gov.ua/mtd/home/

EVALUATION

Current control is carried out at seminar classes in accordance with formulated tasks for each topic. When evaluating educational activities, preference is given to standardized control methods: oral survey, structured written works, discussions, role-playing games, reports. When mastering each topic for the current educational activity, the student is given grades on a 4-point traditional scale. The current academic performance is calculated as the average current score, i.e. the arithmetic average of all grades received by the graduate student (student) on a traditional scale, rounded to 2 (two) decimal places, for example 4.75.

Assessment of current discipline control:

The value of the "**excellent** " rating: the graduate student shows special creative abilities, knows how to acquire knowledge independently, finds and processes the necessary information without the help of a teacher, knows how to use the acquired knowledge and skills to solve problems, is able to produce innovative ways of solving problems, convincingly argues answers, independently reveals his own gifts and inclinations.

The meaning of the grade "**good** ": the graduate student has a good command of the studied material, applies it in practice, solves exercises and problems in standard situations, independently corrects the mistakes made, the number of which is insignificant.

The value of the rating is "**satisfactory** ": the graduate student is able to master a significant part of the theoretical material, but mainly in a reproductive form, demonstrates knowledge and understanding of the main provisions, can analyze the educational material with the help of the teacher, correct errors, among which there are a significant number of essential ones.

The value of the rating is "**unsatisfactory** ": the graduate student has mastered the material at the level of individual fragments, which constitute a small part of the educational material.

Only those graduate students who have no academic debt and have an average score for the current educational activity of at least 3.00 are admitted to the final certification.

Forms and methods of final control

The final control in the discipline " Neurology " is an exam.

The grade for the discipline is the arithmetic average of two components:

1) average current score as the arithmetic average of all current grades;
2) traditional exam grade.

The obtained average grade for the discipline by multiplying it by 40 (the obtained grade is rounded to whole numbers) is converted into a grade on a 200-point scale, which, in turn, is converted into a traditional grade on a discipline on a 4-point scale.

GPA by discipline	Rating from the discipline on a 200-point scale	Rating from the discipline on a 4-point scale (traditional assessment)
4.62–5.0	185–200	5
3.77–4.61	151–184	4
3.0–3.76	120–150	3

Individual work

Assessment of the independent work of graduate students and applicants, which is provided for in the topic along with classroom work, is carried out during the current control of the topic in the corresponding classroom session, as well as at the final control (exam).

COURSE POLICY ("rules of the game")

Deadlines and Rescheduling Policy

Tasks must be completed on time according to the deadline. For untimely completion of the assignment, the graduate student receives an unsatisfactory grade. If the student of higher education was absent from classes for any reason, then the practice is carried out in the terms set by the teacher in accordance with the "Regulations on the Organization of the Educational Process at ONMedU" (link to the regulations on the website university https://onmedu.edu.ua/wp-content/uploads/2020/01/osvitnij-proces.pdf) . Reassembly is carried out in accordance with the approved schedule.

Academic Integrity Policy

The policy of the educational component is based on the principles of academic integrity (link to the regulations on the university website https://onmedu.edu.ua/wp-content/uploads/2020/07/polozhennja-pro-dobrochesnist.pdf) and is determined by the system of requirements that the teacher presents to of the applicant when studying the educational component:

- independent performance of educational tasks, tasks of current and final control of learning results (for persons with special educational needs, this requirement is applied taking into account their individual needs and capabilities);
- references to sources of information in case of use of ideas, developments, statements, information.

Attendance and Tardiness Policy

Attendance and work in classroom classes (lectures and seminar classes) is mandatory for obtaining a satisfactory grade. A graduate student is allowed to be late for no more than 10 minutes.

Mobile devices

It is permissible to use mobile devices during the lesson with the teacher's permission.

Behavior in the audience

While in the audience, the following values should be cultivated: respect for colleagues; tolerance for others; receptivity and impartiality; argumentation of agreement or disagreement with the opinion of other participants in the discussion, as well as one's own opinion; respecting the dignity of the opponent's personality during communication; compliance with the ethics of academic relationships.