

REQUIREMENTS

Semmelweis University, Faculty of General Medicine – single, long-cycle medical training programme Name of the host institutions (and any contributing institutions): Semmelweis University, Department of Neurology, Department of Neurosurgery and Neurointervention			
Name of the subject: in English: Neurology and Neurosurgery in German: Neurologie und Neurochirurgie Credit value: 6 Semester: <i>(as defined in the curriculum)</i>			
block total hours: 96	lectures: 24	practical lessons: 48	seminars: 24
Type of subject: <u>compulsory</u> optional elective (PLEASE UNDERLINE AS APPLICABLE)			
Academic year: 2024/2025			
Language of instruction, for optional or elective subjects: English			
Course code: AOKNEU963_1A <i>(In the case of a new subject, this cell is filled in by the Dean's Office, following approval)</i>			
Course coordinator: Dániel Bereczki M.D. D.Sc. Place of work, phone number: Department of Neurology, Semmelweis University, 1083 Budapest, Balassa u.6. +36-1-2100337 Position: Head of the department Date and number of habilitation: 12/1999. DOTE			
Objectives of the course and its place in the medical curriculum: Acquisition of theoretical and practical neurological knowledge required in general medical education.			
Place of instruction (address of lecture hall or seminar room etc.): Conference room and wards of the Department of Neurology, H-1083 Budapest, Balassa u.6. Department of Neurosurgery and Neurointervention (H-1145.Budapest. Amerikai út 57.)			
Competencies acquired through the completion of the course: The student learns the technique of neurological physical examination and the interpretation of the findings. Detects when examining a patient in need of urgent care. Knows the most common neurological and borderline disorders.			
Prerequisites for course registration and completion: 1. Internal Medicine I. 2. Medical imaging			
Conditions for concurrent course registration and permission thereof in the case of a multi-semester subject: -			
Student headcount conditions for starting the course (minimum, maximum) and method of student selection:			

Minimum and maximum number of students registering for the course: Minimum 10.
Maximum:50

Student selection method: Via the NEPTUN system, in order of application

Detailed course description:

(Theoretical and practical instruction must be broken down into lessons (weeks), numbered separately. Please provide the names of lecturers in both types of lessons, indicating guest lecturers. This information is not to be attached separately. CVs of guest lecturers, however, must be attached.)

1st week					
time	Monday	Tuesday	Wednesday	Thursday	Friday Bank Holiday
8:00 - 8:45	History taking	Discussing of homework	Discussing of homework	Day off	Discussing of homework
8:45 - 9:30	Meningeal signs Examination of the head, neck and spine	Examination of the motor system I.	Examination of the sensory system I.		Altered states of consciousness
9:30 - 10:00					
10:00 - 10:45	Examination of cranial nerves I-VI.	Examination of the motor system II.	Examination of the sensory system II.		The brainstem
10:45-11:30	Examination of cranial nerves VII-XII.	Motor syndromes	Sensory syndromes		The diencephalon
lunch break					
12:30 - 13:15	Patient presentation	Patient presentation	Examination of the vestibular system		Memory and related structures
13:15 - 14:00	Patient presentation	Patient presentation	Examination of the cerebellum I		Memory and related structures
14:00 - 14:30					
14:30 - 15:15	Patient presentation	Patient presentation	Examination of the cerebellum II		Patient presentation
15.15-16:00	Discussion, homework	Discussion, homework	Discussion, homework		

2nd week					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
				Day off	
8:00 - 8:45	Discussing of homework	Discussing of homework	Discussing of homework		Discussing of homework
8:45 - 9:30	Altered states of consciousness	Examination of higher cerebral functions - Aphasia	Cerebrovascular Disorders I.		Dementias I.
9:30 - 10:00					

10:00 - 10:45	Altered states of consciousness	Examination of higher cerebral functions- Agnosia, apraxia	Cerebrovascular Disorders II.		Dementias II.
10:45- 11:30	Examination of the unconscious patient	Prefrontal syndromes	Cerebrovascular Disorders III.		Dementias III.
Lunch break					
12:30 - 13:15	Headaches and neuralgias	Neuromuscular disorders, myopathies,	Disorders of spinal cord and radices		Movement disorders
13:15 - 14:00	Headaches and neuralgias	Neuropathies Motoneuron diseases	Disorders of spinal cord and radices		Movement disorders
14:00 - 14:30					
14:30 - 15:15	Patient presentation	Patient presentation	Patient presentation		Patient presentation
15.15- 16:00	Patient presentation Homework	Patient presentation Homework	Patient presentation Homework		Patient presentation Homework

Time	3rd week				
	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 - 8:45	Discussing of homework	Discussing of homework	Neurosurgery	Day off	Discussing of homework
8:45 - 9:30	Epilepsy	Multiple sclerosis	Neurosurgery		Neuroinfection
9:30 - 10:00					
10:00 - 10:45	Epilepsy	Multiple sclerosis	Neurosurgery		Neuroinfection
10:45- 11:30	Epilepsy	Multiple sclerosis	Neurosurgery		Neuroinfection
Lunch break					
12:30 - 13:15	Tumors of the central nervous system	Neurological consequences of craniospinal traumas	Neurosurgery		Encephalopathi
13:15 - 14:00	Tumors of the central nervous system	Alcohol related nervous system disorders	Neurosurgery		Encephalopathi
14:00 - 14:30					
14:30 - 15:15	Patient presentation	Patient presentation	Neurosurgery	Patient presenta	

15.15-16:00	Patient presentation Homework	Patient presentation Homework	Neurosurgery		Discussion
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4th week

Time	Monday	Tuesday	Wednesday	Thursday	Friday
	vizsga/szünet	vizsga/szünet		vizsga/szünet	vizsga/szünet
8:00 - 16:00	Neurosurgery	Preparing day	Preparing day	written exam	oral exam

Tutors:

Neurology theory

Dr. Arányi Zsuzsanna, Dr. Bereczki Dániel, Dr. Bozsik György, Dr. Csillik Anita, Dr. Debreczeni Róbert, Dr. Farkas Zsuzsanna, Dr. Gulyás Szilvia, Dr. Gunda Bence, Dr. Hornyák Csilla, Dr. Iljicsov Anna, Dr. Ilniczky Sándor, Dr. Kollai Sarolta, Dr. Kovács Tibor, Dr. Mezei Zsolt, Dr. Milanovich Dániel, Dr. Nyilas Nóra (neuroradiologist), Dr. Sipos Ildikó, Dr. Soós Krisztina, Dr. Tóth Adrián

Neurology practice

Dr. Bozsik György, Dr. Dabasi Loránd, Dr. Debreczeni Róbert, Dr. Fritz Pablo, Dr. Gaál Anna, Dr. Dobronyi Levente, Dr. Farkas Zsuzsanna, Dr. Gulyás Szilvia, Dr. Gunda Bence, Dr. Hornyák Csilla, Dr. Iljicsov Anna, Dr. Ilniczky Sándor, Dr. Kelemen Andrea, Dr. Kollai Sarolta, Dr. Kovács Tibor, Dr. Lambertus Iván, Dr. Mezei Zsolt, Dr. Milanovich Dániel, Dr. Palotai Marcell László, Dr. Papp Andrea, Dr. Pál Hanga, Dr. Sipos Ildikó, Dr. Soós Krisztina, Dr. Szatmári Szabolcs, Dr. Szóke Kristóf, Dr. Takács Tímea Tünde, Dr. Tóth Adrián

Neurosurgery

Dr. Bagó Attila, Dr. Balogh Attila, Dr. Banczerowski Péter, Dr. Benkő Zsolt, Dr. Berényi György, Dr. Czigléczi Gábor, Dr. Eröss Loránd, Dr. Fedorcsák Imre, Dr. Fekete Tamás, Dr. Gál Erika, Dr. Halász László, Dr. Markia Balázs, Dr. Mezei Tamás, Dr. Misik Ferenc, Dr. Nagy Dávid, Dr. Nagy Gábor, Dr. Nagy Zoltán, Dr. Orbay Péter, Dr. Padányi Csaba, Dr. Papp Zoltán Attila, Dr. Rácz Adrien, Dr. Sipos László, Dr. Szegedi László, Dr. Várady Péter, Dr. Vitanovic Dusan

LIST OF QUESTIONS FOR VTH YEAR NEUROLOGY SEMIFINAL EXAMINATION

I. Neuroanatomical, physiological and biochemical basis of neurology

1. The visual system
2. Innervation of extraocular muscles. The oculomotor nuclei.
3. Gaze control. Gaze disturbances
4. Pupillary reflex arcs. Disturbances of pupillary reflexes.
5. Trigeminal nerve
6. Facial nerve
7. The vestibular system
8. Hearing
9. Glossopharyngeal, vagus, accessory and hypoglossal nerves
10. Organization of motor control
11. Sensory systems
12. Gross anatomy of the hemispheres
13. Basal ganglia and the thalamus
14. The limbic system
15. The cerebellum

16. Blood supply of the hemispheres. Cerebral metabolism
17. Blood supply of the brainstem, cerebellum and the spinal cord
18. The cerebrospinal fluid

II. Basic neurology

1. Classification of reflexes (stretch, superficial, abnormal and primitive reflexes)
2. Characteristics of upper and lower motoneuron lesion
3. Paresis syndromes according to the site of lesion
4. Symptoms of spinal cord damage
5. Medulla oblongata (bulbar) syndromes caused by circulatory disorders
6. Pontine syndromes caused by circulatory disorders
7. Mesencephalic syndromes caused by circulatory disorders
8. Muscle tone control
9. Nystagmus
10. Vertigo and dizziness; peripheral and central vestibular syndromes
11. Symptoms of cerebellar lesions
12. Symptoms of frontal lobe damage
13. Symptoms of temporal and occipital lobe damage
14. Symptoms of parietal lobe damage
15. Symptoms of occipital lobe damage
16. Thalamic syndromes
17. Clinical examination and types of aphasia
18. Structural basis and types of unconsciousness
19. Physical examination of the unconscious patient
20. Increased intracranial pressure, brain herniations, hydrocephalus
21. Hyperkinesia
22. Gait disturbances
23. Bladder and bowel dysfunction
24. Symptoms of intervertebral disc herniation
25. Lesions of the peripheral nerves of the upper extremity. Tunnel syndromes on the upper limb.
26. Lesions of the peripheral nerves of the lower extremity.

III. Neurological disorders

1. Classification of ischaemic cerebrovascular disorders
2. Intracranial bleedings, subarachnoidal hemorrhage
3. Symptomatology of Parkinson's disease
4. Classification of headaches. Trigeminal neuralgia
5. Focal epilepsies
6. Generalized epilepsies
7. Meningitis. Examination of the CSF in inflammatory neurological diseases
8. Encephalitis
9. Diagnosis of polyneuropathies
10. Emergency in neurology
11. Traumatic CNS diseases
12. Diagnosis of dementia
13. Multiple sclerosis: signs and diagnosis
14. Intracranial tumors
15. Spinal tumors

16. Disorders of the nervous system due to alcoholism
17. Myasthenia gravis
18. Guillain-Barre syndrome
19. Encephalopathies
20. The motor neuron diseases
21. Muscular dystrophies

Related subjects due to interdisciplinary fields (both compulsory and elective) and potential overlaps between subjects:

1. Neuroanatomy
2. Pharmacology
3. Epidemiology
4. Internal medicine
5. Psychiatry
6. Neurosurgery
7. Traumatology
8. Ophthalmology
9. Otorhinolaryngology
10. Sleep medicine

Attendance requirements; conditions under which students can make up for absences and the method of absence justification: Attendance at lectures and practices is compulsory. Absence may not exceed 10% of the lectures and practices. Replacement is subject to individual assessment.

Form of assessment in the study period:

(including the number, topics and scheduling of oral and written tests, their share in the overall evaluation, make-up tests and improvement tests)

At the beginning of the practices, the instructor checks the preparedness.

In the last week of the block, students take a practical exam, which is a condition for applying for the written theoretical exam. The prerequisite for the practice exam is the ability to use the correct examination technique and the recognition of pathological symptoms. In addition to teaching in contact classes, we help the students' preparation with a book on neurological examination techniques and course material available in the e-learning system.

The written exam takes place in the e-learning system.

The exam consists of 50 computer-randomized multiple-choice questions. The minimum requirement for passing the exam is 60% correct answers.

After an unsuccessful test, one can take an oral test for repair.

Number and type of assignments for individual work and the deadline for submission:

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Requirements to obtain the teacher's signature:

Absence may not exceed 10% of the lectures and practices.

Type of assessment (*comprehensive examination, end-term examination, term-grade, term-grade on a three-grade rating scale, coursework project no examination*):

Comprehensive examination.

Examination requirements:

(*list of examination topics, subject areas of tests / examinations, lists of mandatory parameters, figures, concepts and calculations, practical skills and the optional topics for exam-equivalent coursework projects, their criteria of completion and assessment*)

The prerequisite for the practice exam is the ability to use the correct examination technique and the recognition of pathological symptoms. In addition to teaching in contact classes, we help the students' preparation with a book on neurological examination techniques and course material available in the e-learning system.

<p>Method and type of grading: <i>(Share of theoretical and practical examinations in the overall evaluation. Inclusion of the results of the end-of-term assessment. Possibilities of and conditions for offered grades.)</i> Passing the practical exam is a condition for passing the theory exam. The overall evaluation is based upon the achievement of the multiple choice test in five grade rating system.</p>
<p>List of course books, textbooks, study aids and literature facilitating the acquisition of knowledge to complete the course and included in the assessment, precisely indicating which requirement each item is related to (e.g., topic by topic) as well as a list of important technical and other applicable study aids:</p> <ol style="list-style-type: none"> 1. Arányi Zs., Kamondi A., Kovács T., Szirmai I.: Investigation of neurological patients 2. Lindsay, Bone, Callender: Neurology and Neurosurgery Illustrated. Churchill Livingstone 3. Adams: Principles of Neurology. McGraw-Hill 4. E-learning system (https://itc.semmelweis.hu/moodle/login/index.php)
<p>Signature of habilitated instructor (course coordinator) announcing the course: Prof. Dr. Dániel Bereczki Head of Department</p>
<p>Signature of the director of the host institution: Prof. Dr. Dániel Bereczki Head of Department</p>
<p>Date of submission: 05.June.2024, Budapest</p>
<p>Credit Transfer Committee's opinion:</p>
<p>Comment of the Dean's Office:</p>
<p>Signature of the Dean:</p>



¹ Dékáni Hivatal tölti ki, jóváhagyást követően.

² Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!

³ Pl. terepgyakorlat, kórlapelemzés, felmérés készítése stb.

⁴ Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.

⁵ Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgáztatás témakörét és módját.

⁶ Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérések eredményeink beszámítási módja.

