

COURSE PROGRAMME
Nervous system and sensory organs
1st year medical students – 2nd semester 2025

WEEK	LECTURES – 2 HRS.	PRACTICAL EXERCISES 2 X 2 HRS.
I 10.02.-14.02	Introduction to morphology of nervous system. Development of nervous system. Spinal cord. Spinal nerves.	1. Cranium. Frontal, parietal and occipital bones. Vault. Skull of a newborn. 2. Skull. Temporal bone and ethmoid bones. Cavities and canals in the temporal bone.
II 17.02.-21.02.	Brain. General description. Medulla oblongata.	1. Skull. Sphenoid bone. Facial bones – maxilla, mandible, zygomatic, palatine, nasal, lacrimal, inferior nasal concha, vomer and hyoid bone. 2. Skull. Nasal cavity. Paranasal sinuses. Orbit. Temporal, infratemporal and pterygopalatine fossae.
III 24.02.-28.02.	Pons. Rhomboid fossa. Midbrain.	1. Skull. External and internal cranial base. Openings and elements that pass through them. 2. Practical and theoretical quiz.
IV 03.03.-07.03. /03.03. National holiday/	Cerebellum.	1. Spinal cord. External and internal structure. Spinal meninges and blood supply. 2. Spinal cord. Spinal cord, spinal ganglion, autonomic ganglion and peripheral nerve – microscopic structure.
V 10.03.-14.03.	Diencephalon. Thalamus, epithalamus, metathalamus.	1. Medulla oblongata. External and internal structure. 2. Pons. External and internal structure. Rhomboid fossa.
VI 17.03.-21.03.	Diencephalon. Hypothalamus, subthalamus.	1. Midbrain. External and internal structure. 2. Cerebellum. Fourth ventricle. Cerebellar cortex, choroid plexus – microscopic structure.
VII 24.03.-28.03.	Forebrain – general description. Brain cortex.	1. Diencephalon. Thalamus, epithalamus, metathalamus. 2. Diencephalon. Hypothalamus, subthalamus. Third ventricle.
VIII 31.03.-04.04.	Forebrain – white matter. Basal ganglia.	1. Telencephalon. Gross brain. Brodmann's areas. Cerebral cortex – microscopic structure. 2. Telencephalon – white matter, basal ganglia. Lateral ventricles.
IX 07.04.-11.04.	Rhinencephalon. Limbic system.	1. Rhinencephalon. Limbic system. 2. Meninges. Blood supply of CNS.
X 14.04.-18.04.	Easter Holiday	Easter Holiday

XI 21.04.-25.04. /21.04. Easter holiday/	Eye.	1. Eye. Eyeball and accessory ocular organs. Visual system. 2. Ear. External and middle ear. Inner ear. Osseous labyrinth. Auditory and vestibular systems.
XII 28.04.-02.05. /01.05. National holiday/	Ear.	1. Eye and ear – microscopic structure . 2. Cranial nerves – general remarks. III, IV, VI, XII.
XIII 05.05.-09.05. /06.05. National holiday/	Cranial nerves I.	1. Cranial nerves – V. 2. Cranial nerves – VII, IX.
XIV 12.05.-16.05.	Cranial nerves II.	1. Cranial nerves – X, XI. 2. Revision.
XV 19.05.-23.05.	Autonomic nervous system.	1. Practical and theoretical quiz . 2. Pathways in the brain. Autonomic nervous system – microscopic structure of autonomic ganglion – revision .
XVI 26.05.-30.05. /26.05. National holiday/	Pathways in CNS.	1. Sensory organs. Receptors of general sensation – taste buds, Pacinian and Meissner's corpuscles - microscopic structure . 2. Revision on NS and sensory organs.

Semestrial exams:

Theoretical quiz	1 x 20 pts.
	1 x 40 pts.
Practical quiz	2 x 20 pts.
Total	100 pts.

Evaluation:

0 – 59p. – 2.00
60 – 64p. – 3.00
65 – 69p. – 3.50
70 – 74p. – 4.00
75 – 79p. – 4.50
80 – 84p. – 5.00
85 – 89p. – 5.50
90 – 100p. – 6.00

Exemption:

Students with an overall score from **both semesters** over 80% (≥ 160 points) of the total score (200 points) will exempt the practical part of the final exam.

Students with an overall score from both tests this semester over 90% (≥ 90 points) of the total score (100 points) will exempt the MCQ part and the practical on Nervous System and Sensory organs of the final exam.

Literature

Textbooks

1. Human Anatomy, Textbook for medical and dental students, Volume I and II, Vladimir Ovcharov, ARSO Medical Publishing House, First Edition 2023
2. Anatomy of the Central Nervous System. V. Vankov, M. Vankova. STENO publ.house, Varna, 2012-2015-2017 and 2021.
3. Sobotta Anatomy Textbook: English Edition with Latin Nomenclature. Jens Waschke, Tobias M. Böckers, Friederich Paulsen eds., 1st edition, Urban & Fischer, 2019.
<https://www.elsevier.com/books/sobotta-anatomy-textbook/paulsen/978-0-7020-6760-0>
4. Gray's Anatomy for Students, Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell, Fourth edition, Elsevier 2019-2020
5. High-Yield Neuroanatomy (High-Yield Series) by James D. Fix (Sep 2, 2008)
6. Functional Neuroanatomy: Text and Atlas, 2nd Edition (LANGE Basic Science) by Adel Afifi and Ronald Bergman (Jan 28, 2005)
7. Baltadjiev A., Popova F., Grozlekova L., Petleshkova Ts., Harizanova Z. Topographic anatomy of the head, Lax book, 2024, Plovdiv.

Manuals

1. A Practicum of Organ Histology - Atanassova P, Koeva Y, Petrova E, Penkova N, Trichkova V.
2. MCQ in anatomy. A self-testing supplement to human anatomy. Locomotory & Central Nervous System. S.T. Sivkov, S.S. Novakov. 2012.

Atlases

1. Delchev S., Novakov S., Ivanova R. Photographic atlas of human anatomy, ed. S.Sivkov, Lax book, 2019, Plovdiv.
2. Sobotta. Atlas of Human anatomy, 15th edition, Urban & Fisher, 2011.
→ Sobotta Atlas of Human Anatomy, Volume 3: Head, Neck and Neuroanatomy, 2020 Edition Elsevier Limited, Oxford, 2018

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