



UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

SPECIAL ANATOMY	
Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Academic discipline	BIO/16 (HUMAN ANATOMY)
Department	DEPARTMENT OF BRAIN AND BEHAVIORAL SCIENCES
Course	NEUROPHYSIOPATHOLOGY TECHNIQUES
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	(01/03/2022 - 17/06/2022)
ECTS	2
Lesson hours	16 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	POLIMENI MARIAROSA (titolare) - 2 ECTS
Prerequisites	Basic Human Anatomy
Learning outcomes	The module focuses on anatomical and functional aspects of the major central nervous system districts and sensory and motors functional systems. .
Course contents	<p>Special Anatomy module program</p> <p>Anatomical and functional divisions of the nervous system.</p> <p>Nervous cells: morphofunctional features and localization.</p> <p>Embryology: brain and spinal cord development.</p> <p>Blood supply of brain and spinal cord. Meninges, brain ventricular system, choroid plexuses, cerebrospinal fluid, blood–brain barrier.</p>

	<p>Telencephalon: cerebral hemispheres, lobes, cerebral sulci and gyri, laminar and columnar cortex organization, cortical areas, basal ganglia, white matter organization.</p> <p>Diencephalon, brainstem, cerebellum, spinal cord and their internal divisions.</p> <p>Cranial and spinal nerves, peripheral ganglia.</p> <p>Receptor systems, sensory organs and sensory functional systems: spinobulbothalamic tract, spinothalamic tract, trigeminal system, spinocerebellar tract, medial lemniscus, visceral lemniscus;</p> <p>Auditory and vestibular system (vestibular and cochlear receptors, static and kinetic labyrinths, Auditory and vestibular tracts and cortex areas); Visual system (eye, control of the intrinsic and extrinsic musculature of the eye, retina organization and the visual pathways); Integration of the static and visual information; Gustative system; Olfactory system and limbic system.</p> <p>Reticular formation and nuclei of the brainstem.</p> <p>Peripheral effectors and motor systems: motor areas in cerebral corte,basal ganglia, cerebellum, brain stem nuclei, efferent motor component of cranial and spinal nerves; Corticospinal tract, Corticobulbar tracts, Rubrospinal, Reticulospinal, Lateral Vestibulospinal tract, Vestibular system, medial longitudinal fasciculus, Broca's Area and speech, frontal eye fields;</p> <p>Motion control: direct and indirect motor pathways, cognitive, oculomotor and limbic pathways; Autonomic nervous system. Reflexes.</p> <p>Higher Cortical Functions. Clinical neuroanatomy.</p>
Teaching methods	<p>Frontal lessons and peer education exercises on anatomical models with the help of dynamic 3D visual resource</p>
Reccomended or required readings	<p>- Neuroanatomia Clinica, S.G. Waxman, Piccin</p> <p>- Neuroanatomia con riferimenti funzionali clinici, M.J.Turlough FitzGerald et al., Elsevier</p> <p>- Sistema nervoso centrale, G.Grasso, Piccin</p> <p>- Atlante di neuroanatomia funzionale, W.J. Hendelman, Casa Editrice Ambrosiana</p>
Assessment methods	<p>Oral examination</p>
Further information	<p>-</p>
Sustainable development	

