

SEMESTER II

LSM3222 HUMAN NEUROANATOMY

Prerequisite: LSM1102 or LSM1106

Workload: 24 lecture hours + 12 practical hours

A working knowledge of human neuroanatomy is essential for many fields of biomedical science, practice and research. The purpose of this module is to cover the basic functional neuroanatomy of the human nervous system, including overview, neurohistology, peripheral nervous system, autonomic nervous system and central nervous system. It takes a regional-systemic approach to understanding human nervous system structure and function - that parallels the core knowledge used in clinical practice. Emphasis is placed on the unique anatomical features and neurochemistry of different parts of the central and peripheral nervous system, while demonstrating their synaptic connectivity and interrelatedness of their functions.

S/N	Topics	Lecture hours
1	Weeks 1 to 3 <ul style="list-style-type: none"> • Overview of the human nervous system • Histology of peripheral nerves • Spinal nerves and reflex arc • The brachial and lumbosacral plexuses • Practical on peripheral nerves, brachial plexus and sympathetic trunk 	Prof Ong Wei Yi 6 hours Emeritus Prof Ling Eng Ang 8 hours
2	Weeks 4 to 8 – <ul style="list-style-type: none"> • Autonomic innervation of thoracic organs • Autonomic innervation of abdominal and pelvic organs • The vertebral column and gross morphology of the spinal cord • Ascending tracts in the spinal cord • Descending tracts in the spinal cord • The skull and meninges, gross anatomy and blood supply of the brain • Practical on the vertebral column and spinal cord, the skull and meninges, gross anatomy and blood supply of the brain 	Prof Ong Wei Yi 4 hours Emeritus Prof Ling Eng Ang 2 hours
3	Weeks 9 to 13 – <ul style="list-style-type: none"> • Special senses – sight and hearing • Cranial nerves • The brainstem • The thalamus and hypothalamus • Histology of the cerebral cortex • Functional anatomy of the cerebral cortex • The basal ganglia – dorsal striatum • Olfactory and limbic system – septum and hippocampus • The limbic system – the ventral striatum and amygdala • Practical on cross sectional brain anatomy 	Prof Ong Wei Yi 12 hours Emeritus Prof Ling Eng Ang 4 hours
Total lectures :		24 hours
Total Laboratory:		12 hours
Total hours:		36 hours

TEXT BOOK (Reference books):

Vanderah TW and Gould DJ (2016) Nolte's The Human Brain. An Introduction to its Functional Anatomy. 7th Edition. Elsevier

MODE OF ASSESSMENT:

Continuous Assessment 1 (CA1 - 20%)
 Continuous Assessment 2 (CA2 - 20%)
 Final Examination (Exam - 60%)

MODULE CO-ORDINATOR:

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LECTURERS:

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 Emeritus Prof Ling Eng Ang (Tel: 6516 3203; Email: antlea@nus.edu.sg)