NATS 3037 NEUROANATOMY

Credit Points 10

Legacy Code 300754

Coordinator Sam Merlin (https://directory.westernsydney.edu.au/search/name/Sam Merlin/)

Description This unit builds on the human anatomy and physiology studied in first and second year, equipping students with detailed knowledge of functional neuroanatomy, with particular emphasis on the central nervous system. Cadaver specimens are used to facilitate the learning of spatial relationships between structures. The study of neurological function and dysfunction integrates many previously learned scientific principles.

School Science

Discipline Medical Science

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) BIOS 1025 OR
NATS 1009 OR
LGYA 5934 AND
NATS 2034

Equivalent Subjects LGYA 5934 - Neuroanatomy LGYA 7786 - Clinical Neurosciences LGYA 7060 - Clinical Neurosciences

Restrictions Successful completion of 80 credit points. Due to space limitations, students must be enrolled in the following programs:3733 Bachelor of Medical Science (Forensic Mortuary Practice) 3755 Bachelor of Medical Science, 3758 Bachelor of Advanced Medical Science, 4656 Bachelor of Health Science, 4706 Bachelor of Physiotherapy, 4708 Bachelor of Podiatric Medicine, 4709 Bachelor of Podiatric Medicine (Honours), 4711 Bachelor of Occupational Therapy, 4712 Bachelor of Occupational Therapy (Honours), 4733 Bachelor of Physiotherapy (Honours), 6002 Diploma in Science/Bachelor of Medical Science, 6042 Diploma in Science/Bachelor of Medical Science. Note: Enrolment of students in other programs may be approved by the subject Coordinator for the Summer session, subject to vacancies and meeting equivalent prerequisite knowledge. Please lodge a Rule Waiver request for enrolment.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Identify neuroanatomical structures from cadaveric specimens, photographs/diagrams & models, and discuss their functions.
2. Identify and discuss histological features of the nervous system.
3. Explain the embryological development of the nervous system and analyse the consequences of alterations in development.
4. Explain the functional and spatial relationships between structures and analyse the consequences of alterations in these relationships.
5. Explain the pathogenesis/pathophysiology, manifestations and treatment of neurological disorders.

Subject Content

Embryological development of the nervous system
Topographical features, internal anatomy, and functions of the cerebrum, cerebellum, brain stem & spinal cord
Relationship of cranial nerves with the brain and cranial cavity
Major nuclei of the brain and associated functions
Nuclei and functions of the diencephalon, basal ganglia & brain stem
Neural histology, signalling & transmission
Major limbic structures functions
Sensory reception and pathways
Motor structures and pathways
Spinal reflexes
Vasculature of the brain and spinal cord
Neurological disorders/dysfunction
Neural basis of pain

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/ Group Task
Short answer	2-3 pages	25	N	Individual
Short answer	up to 30 mins	25	N	Individual
Multiple choice	test 1 up to 30 mins, test 2 up to 40 mins, test 3 up to 60 mins	50	N	Individual

Summer A Day

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/ Group Task
Short answer	Worksheets x 4 (2-3 pages)	25	N	Individual
Short answer	up to 30 mins	25	N	Individual
Multiple choice	2 hours	50	N	Individual

Prescribed Texts

- Nolte, J 2009, The human brain, 6th edn, Mosby Elsevier, Philadelphia

Teaching Periods

Summer A

Online

Online

Subject Contact Sam Merlin (https://directory.westernsydney.edu.au/search/name/Sam Merlin/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS3037_22-SUA_ON_O#subjects)

Spring

Campbelltown

Day

Subject Contact Peter Shortland (https://directory.westernsydney.edu.au/search/name/Peter Shortland/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS3037_22-SPR_CA_D#subjects)