NATS 3037 NEUROANATOMY

Credit Points 10

Legacy Code 300754

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

Description This subject 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 fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) NATS 1009 Human Anatomy and Physiology 1

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

1. Embryological development of the nervous system
2. Topographical features, internal anatomy, and functions of the cerebrum, cerebellum, brain stem & spinal cord
3. Relationship of cranial nerves with the brain and cranial cavity
4. Major nuclei of the brain and associated functions
5. Nuclei and functions of the diencephalon, basal ganglia & brain stem
6. Neural histology, signalling & transmission
7. Major limbic structures functions
8. Sensory reception and pathways
9. Motor structures and pathways
10. Spinal reflexes
11. Vasculature of the brain and spinal cord
12. Neurological disorders/dysfunction
13. 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.

Type	Length	Percent	Threshold	Individual/ Group Task
Case Study	2-3 pages	20	N	Individual
Practical Exam	up to 45 minutes	25	N	Individual
Practical Exam	up to 45 minutes	25	N	Individual
End-of-session Exam	up to 60 minutes	30	N	Individual

Summer

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.

Type	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

- Michael-Titus AT & Shortland P, The Nervous System: Basic Science and Clinical Conditions, 3rd Edition, Elsevier
- Nolte J, 2015, The human brain 7th edition, Mosby, Elsevier, Philadelphia

Teaching Periods

Spring (2024)

Campbelltown

On-site

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_24-SPR_CA_1#subjects)