NATS 1022 FUNCTIONAL ANATOMY

Credit Points 10

Legacy Code 401410

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

Description From 2020 this unit replaces 400881 - Functional Anatomy. This unit covers in depth the functional anatomy of the musculoskeletal system. Special attention is given to the relationship between form and function, the terminology used to describe human movement and thorough knowledge of the bony landmarks, joints, muscle attachments, innervation, blood supply along with detailed actions of specific muscles and muscle groups. Emphasis is on a practical functional context with the relevance to clinical applications such as surface and imaging anatomy, and the anatomical basis of common injuries. Learning experience intends to stimulate proactive deep approach in learning anatomy motivated by the outcomes driven from specialist work within the Health professions.

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 1 subject

Pre-requisite(s) NATS 1009 OR
NATS 1010

Equivalent Subjects BIOS 1019 - Human Medical Sciences 3 BIOS 1015 - Functional Anatomy

Incompatible Subjects LGYA 5933 - Introduction to Human Anatomy and Histology BIOS 1024 - Introduction to Human Physiology BIOS 1018 - Human Medical Sciences 2 NATS 2029 - The Appendicular Skeleton

Restrictions

Students must be enrolled in Science, Sport and Exercise Science, Physiotherapy, Occupational Therapy or Podiatry due to limited Wet Anatomy laboratory space.

Learning Outcomes

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

1. Describe and explain bone, joint and muscle tissue types, properties and functions;
2. Identify and describe in detail the muscle attachments, innervations and blood supply of the upper limb including the pectoral girdle;
3. Identify and describe in detail the muscle attachments, innervations and blood supply of the lower limb including the pelvis, and the pelvic girdle;
4. Identify and describe in detail the muscle attachments, innervations and blood supply of the trunk, and the head and the neck;
5. Identify, describe and evaluate the role of muscular activity in these regions;
6. Describe and explain the joint structure and function in these regions;
7. Describe and analyse the range of motion of the joints of the spine and extremities to functional situations.

Subject Content

The musculoskeletal system, including both the appendicular and the axial skeleton, will be studied in accordance with the following content:
- Language of Anatomy: such as the anatomical position and body movements, anatomical planes, axes, and regions;
- Bones: classifications, features, relative positions, and muscle attachments;
- Joints: classifications, structure and function, ligaments, joint mechanics including the muscles - prime movers and stabilizers;
- Muscles: muscle types, precise attachments, actions and topography;
- Nerves: major plexuses and major branches, functionally relevant muscle-nerve relationships, dermatomes and myotomes;
- Blood supply: arterial supply and venous drainage;
- Problem-based and case-based studies relevant to health professions, including examples of Daily Activities, sport exercises, common injuries, surface Anatomy and medical imaging.

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
Laboratory Spotter Exam x 2	Up to 30 minutes	40	N	Individual
Progressive mini-tests x 2	Up to 1 hour	50	N	Individual
Worksheets x 3	1-4 weeks	10	N	Individual

Prescribed Texts

- Moore, K., Dalley, A. F, & Agur, A. M. R. (2014). Clinically oriented anatomy (8th ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins

Teaching Periods

Spring

Campbelltown

Day

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

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS1022_22-SPR_CA_D#subjects)