



MEDICINE AND SURGERY

Course: Body Architecture

Year: 1st

Period: 2nd semester

Credits: 9

Objectives

Knowledge and understanding

This course addresses a) the organization of the human body from the regional point of view, underlining the close relation of the knowledge of anatomy with the clinical practice and b) the development and organization of the central and peripheral nervous system

The first part of the course is focused on the general anatomical nomenclature and on a morpho-functional approach to the locomotor system as to allow the student a self-guided study of bones, joints and muscles.

In the second part of the course, a clinically oriented approach is used to describe the regional anatomy of the human body: the boundaries and compartments of the body regions will be analysed as well as the organization of the organs they contain, their relationship, vascularization and innervation. Special attention will be given to surface anatomy and its relevance for the physical examination.

The general learning goal of the neuroanatomy module is to understand, starting from a phylogenetic and developmental perspective, the macroscopic anatomy and internal architecture of the central nervous system and the organization of the peripheral nervous system.

The course includes also an introduction to the basic aspects of radiology as part of a living anatomy approach.

An important learning goal of the course is also to introduce students to the basic aspects of the physical examination of the thorax and abdomen, of the orthopedic examination and of blood sampling.

Applying knowledge and understanding

By the end of the course students will be able to

- Apply the knowledge of anatomy to the understanding and solution of basic clinical and surgical problems
- Apply the knowledge of anatomy to perform the basic steps of the physical examination
- Apply their knowledge of anatomy to recognize the basic aspects of radiological images



Making judgements; Communication skills; Learning skills.

By the end of the course students will have

- developed some abilities to communicate and work in team
- acquired some learning skills such as study in a group, organize knowledge, revise and retain information, select information.

Prerequisites

To take Body Architecture exam Building Bodies exam must have been passed

Contents

GENERAL ANATOMY

Topic 1. Introduction and generalities

Topic 2. Musculoskeletal system: bones, joints and skeletal muscles

Topic 3. Integumentary system

Topic 4. Vascular layout

Topic 5. Skull: bones, joints, fossae

REGIONAL/CLINICAL ANATOMY

Topic 1. Back

Topic 2. Thorax

Topic 3. Abdomen, pelvis and perineum

Topic 4. Pectoral and pelvic girdles, upper and lower limb

NEURONATOMY: development of the Nervous System, Gross Neuroanatomy of the CNS and PNS

Topic 1. Phylogenesis and general organization of the Nervous System

Topic 2. Development of the nervous system



Topic 3. Spinal cord, spinal nerves

Topic 4. Brainstem and cerebellum

Topic 5. Autonomic nervous system

Topic 6. Telencephalon and diencephalon

Topic 7. Peripheral nervous system: spinal plexuses

RADIOLOGY

The purpose of this module is to introduce students to the basic concepts of radiology as to highlight the important relationship between the knowledge of anatomy and the ability to understand and interpret medical images in everyday practice.

Furthermore, the inclusion of radiology in a first year course of anatomy supports and substantiate the learning process of anatomy itself by integrating a the living anatomy approach (together with surface anatomy).

After explaining the basic principles of image formation and the different techniques used in radiology, a specific lecture will be devoted to the different region of the body underlining the key interpretative elements of normal body structures versus examples of pathological conditions.

Topics

Introduction to radiology

Introduction to radiology of back and spine

Introduction to radiology of the thorax

Introduction to radiology of abdomen and pelvis

Introduction to radiology of upper limb

Introduction to radiology of lower limb

Introduction to radiology of skull and brain

PRACTICALS

Practicals are considered an integral and important part of the course of Body. Attendance is mandatory.

Anatomy practicals



Topics:

- 1) Bones of the skull
- 2) Back and spinal cord
- 3) Thorax
- 4) Abdomen and pelvis
- 5) Upper limb
- 6) Lower limb
- 7) Skull and brain

Practicals introducing students to the basis of the general physical examination:

thorax, heart, abdomen, and orthopaedic physical examination

Practical introducing students to blood sampling

Teaching Methods

Lectures

Collaborative learning

Verification of learning

- A. Written test (Multiple choice questions, True and False questions, Drag and drop onto a background image, Drag and drop into text, Matching, Select missing words, Short answers)
- B. Recognition of items on radiological images
- C. Evaluation of the performance of students on the checklists of the physical examinations and blood sampling (in presence or at distance)

Texts

Gray's Anatomy for Students
Churchill Livingstone

Moore & Dalley
Clinically Oriented Anatomy
Lippincott Williams & Wilkins

Gray's Anatomy The Anatomical Basis Of Clinical Practice
Churchill Livingstone

Netter's Concise Neuroanatomy
Elsevier