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| SUBJECT: | HUMAN ANATOMY OF THE LOCOMOTOR SYSTEM | | |
| CREDITS: | Total: 16 | Theory: 7.5 | Practical: 8.5 |

GENERAL OBJECTIVES

- The general objective is for students to acquire the basic theoretical, practical, embryological, functional, radiological and applied knowledge of the human anatomy of the head, neck, trunk and limbs of the locomotor apparatus.
- Student will also become familiar with international anatomical language and nomenclature and acquire self-teaching and study habits.
- Students will be expected to apply the anatomical knowledge gained to various problems and to form opinions on research topics set.

SPECIFIC OBJECTIVES

At the completion of each extensive section of the course, students should be able to:

- Locate anatomical structures, using anatomical diagrams and nomenclature.
- Identify bone types according to their characteristics and radiological image.
- Distinguish the different classes of joints.
- Identify muscles, arteries, veins, lymph vessels and nerves according to their characteristics.
- Identify the topological location of the most important structures of a given region.
- Identify the regional muscles in a cadaver and describe in each case the particular innervation and function, as well as the nerves, arteries, veins and lymph vessels.
- Deduce from the anatomico-functional knowledge acquired how the mechanics of the locomotor apparatus behave in certain types of movements.
- Deduce from the anatomico-functional knowledge acquired the possible alterations that may be caused by injuries to the different structures of the locomotor apparatus.
- Recognize palpable bone landmarks of the body.
- Identify the muscle masses of the body by palpation.
- Examine the vascular and nerve pathways and the reflexes of different body regions.
- Know how to assess the degree of mobility of different body regions.

PROGRAMME

Theory

General anatomy.

- Topic 1. Introduction to anatomy. Concept. Anatomical position. Planes and axes. Anatomical nomenclature.
- Topic 2. Development of the locomotor apparatus. Generalities of bones, joints and muscles.
- Topic 3. General concepts of angiology and neurology.

Functional and applied anatomy of the upper limb.

- Topic 4. Functional anatomy of the scapular girdle.
- Topic 5. Functional anatomy of the shoulder. Axillary region.
- Topic 6. Functional anatomy of the elbow. Elbow fossa.
- Topic 7. Functional anatomy of the wrist, hand and fingers.
- Topic 8. Vascularization of the upper limb. Arteries, veins and lymph vessels.
- Topic 9. Innervation of the upper limb. Brachial plexus.

Functional and applied anatomy of the head, neck and trunk.

- Topic 10. Functional anatomy of the skull. Temporomandibular joint.
- Topic 11. Functional anatomy of the spinal chord. Cervical, thoracic and lumbar regions. Sacrum.
- Topic 12. Functional anatomy of the neck.
- Topic 13. Functional anatomy of the thoracic walls.
- Topic 14. Functional anatomy of the abdominal walls. Inguinal region.

Functional and applied anatomy of the lower limb.

- Topic 15. Functional anatomy of the pelvic girdle.
- Topic 16. Functional anatomy of the hip.
- Topic 17. Functional anatomy of the knee.
- Topic 18. Functional anatomy of the ankle and foot.
- Topic 19. Vascularization of the lower limb. Arteries, veins and lymph vessels.
- Topic 20. Innervation of the lower limb. Lumbosacral plexus.

Practical training

- Topic 1. Regulations and hygiene in the dissection room. Material (dissection room).
- Topic 2. General osteology (bone bank).

Functional and applied anatomy of the upper limb.

- Topic 3. Osteology of the scapular girdle and shoulder (bone bank).
- Topic 4. Osteology of the arm, elbow and forearm (bone bank).
- Topic 5. Functional anatomy of the wrist, hand and fingers (bone bank).
- Topic 6. Dissection of the posterior regions of the scapular girdle and shoulder (dissection room).
- Topic 7. Dissection of the anterior regions of the scapular girdle and shoulder (dissection room).
- Topic 8. Dissection of the anterior brachial, posterior brachial and elbow regions (dissection room).
- Topic 9. Dissection of the anterior antebrachial, posterior antebrachial and wrist regions (dissection room).
- Topic 10. Dissection of the dorsal and palmar regions of the hand and fingers (dissection room).
- Topic 11. Dissection of the content of the axillary cavity (dissection room).
- Topic 12. Radiological anatomy and other imaging techniques of the upper limb (bone bank).
- Topic 13. Physical examination and functional assessment of the upper limb. Shoulder. Elbow. Wrist and hand.

Functional and applied anatomy of the head, neck and trunk.

- Topic 14. Osteology of the skull (bone bank).
- Topic 15. Osteology of the spinal chord and thorax (bone bank).
- Topic 16. Dissection of the neck and thoracic and abdominal walls (dissection room).
- Topic 17. Radiological anatomy and other imaging techniques of the head, neck and trunk (bone bank).
- Topic 18. Physical examination and functional assessment of the spinal chord and lumbar.

Functional and applied anatomy of the lower limb.

- Topic 19. Osteology of the pelvic girdle, hip and thigh (bone bank).
- Topic 20. Osteology of the knee, leg and ankle and foot (bone bank).
- Topic 21. Dissection of the anterior and posterior gluteal and femoral regions (dissection room).
- Topic 22. Dissection of the anterior and posterior regions of the leg and foot (dissection room).
- Topic 23. Radiological anatomy and other imaging techniques of the lower limb (bone bank).

Topic 24. Physical examination and functional assessment of the lower limb. Pelvis and hip. Knee. Ankle and foot.

LEARNING RESOURCES AND TEACHING METHODOLOGIES

Theory classes

A concise introduction will be given to each of the topics in the theory programme, aiming as far as possible to coincide with the timetable of the practical programme.

Practical training:

Sessions will be principally based on using the cadaver to develop and confirm theoretical explanations.

Student will be provided with previously dissected samples, bone structures and radiographic material and will receive all the necessary explanations directly from the teacher of each session.

Practical sessions will be carried out in small groups so that each student, guided by a teacher, can apply the techniques explained.