



UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Physiological Anatomy

Academic Year 2023/2024

1. Organic Unit

Faculty of Business and Economic Sciences

2. Course

Sport Organization Management

3. Cycle

1st

4. Course Unit

Physiological Anatomy (C1106)

5. Scientific Area

6. Curricular Year

1st

7. Type of Curricular Unit / Semester

2nd Semester



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8. Class type and workload (work time)

Theoretical classes:

Practical classes:

Theoretical-Practical Classes 30,00

Tutorial Guidance: 20,00

9. ECTS Credits

6,00

10. Scientific Area Coordinator

11. Regent

Prof. Doutora EMA ADELAIDE CASTRO MENDES CARVALHO DE BRITO AZEVEDO DE AVELAR

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

The student of the degree in Management of Sports Organizations must acquire technical and scientific skills in the knowledge of the structure and function of the human body in view of the mission and vocation of the institutions where he will carry out his work activity, these with services to promote oriented physical activity. The student should know the organization of the human body, its structures of support, movement and relationship, covering general concepts of internal regulation.

15. Specific Objectives

1. Know terminology, identify and place a certain anatomical structure.
2. Understand the functioning of the cell to the organism of the systems that integrate the curricular unit.
3. Understand the internal environment and functional contribution to homeostasis.
4. Know the anatomy of locomotion in its passive and active structure.

16. Skills to be acquired

At the end of the semester, the student should: know the cellular constituents and their activity, also acquiring chemical notions that serve as the basis for life; classify the different types of fabrics; know the skeletal system, joint classifications and denomination of movements; know the musculoskeletal organization and the contraction process.



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17. Teaching Methodology

In view of the typology of classes and characteristics of the curricular unit, expository and interactive classes will be held during the extensive curricular organization by content. Intensive analysis will use tutorial orientation with practical - pedagogical exercises and literature analysis, going beyond critical aspects of a content-centered curriculum, promoting the acquisition of fundamental skills and critical thinking.

18. Course Unit Program



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1. Basic chemistry of life.
 - 1.1. Matter, Mass and Weight.
 - 1.2. Atoms and Elements.
 - 1.3. Atomic structure, Atomic Number, Mass Number and Isotopes.
 - 1.4. Chemical Bonds, Intermolecular Forces and Chemical Reactions.
 - 1.5. Energy: ATP the energy currency.
 - 1.6. Organic and inorganic chemistry concept.
 - 1.7. Acid-Base Balance and pH.
2. The Eukaryotic cell.
 - 2.1. Endosymbiotic process.
 - 2.2. The nucleus, cytoplasm (organelles and cytosol), cytoplasmic membrane.
 - 2.3. Endomembrane system.
 - 2.4. Membrane specializations.
 - 2.5. Cell transport processes: Active and passive.
 - 2.6. Channels and receivers.
3. Fabrics
 - 3.1. Epithelial tissue: Characteristics; intercellular junctions and classification.
 - 3.2. Classification of epithelial tissue: The form, arrangement, surface layer and function.
 - 3.3. Superficial layer, glandular epithelium, endothelium and mesothelium.
 - 3.4. Connective Tissue: Functions, characteristics and histology.
 - 3.5. Classification of connective tissue: Connective tissue proper, cartilaginous tissue, bone tissue, and specialized connective tissue.
 - 3.6. Connective tissue proper: Loose and dense shaped and unshaped.
4. Osteology.
 - 4.1. Metabolic functions and mechanics.
 - 4.2. Skeletal divisions.
 - 4.3. Gross anatomy.
 - 4.4. Cartilage: Hyaline, fibrous and elastic.
 - 4.5. Classification of bones: Long, flat, short, irregular and sesamoid.
 - 4.6. Bone histology: Spongy and compact bone; Cells and Matrix.
 - 4.7. Havers System.
 - 4.8. Intramembranous and endochondral ossification.
 - 4.9. Regulation of bone constitution.
5. Arthrology.
 - 5.1. Plans, Directions and Cavities.
 - 5.2. Moves.
 - 5.3. Classification of joints according to the degree of movement: Synarthroses, Amphiarthroses and Diarthroses.
 - 5.4. Classification according to joints: Non-synovial and synovial.



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- 5.5. Non-synovial, fibrous and cartilaginous joints.
- 5.6. Synovial joints: Constituents and morphological classification.
- 5.7. Joint receptors.

6. Myology.

- 6.1. Muscle functions and properties.
- 6.2. Types of muscle tissue and their characteristics: skeletal, smooth and cardiac.
- 6.3. Musculoskeletal: Striated muscle tissue and connective tissue (mysium).
- 6.4. Musculoskeletal Unit: Actions.
- 6.5. Notion of motor unit.
- 6.6. The striated muscle fiber: Constitution.
- 6.7. Activity at the neuromuscular junction and muscle contraction process.
- 6.8. Thick anatomy and movement.

19. Assessment Methods

Continuous evaluation

It is mandatory for the student to attend at least 60% of the scheduled classes. The assessment consists of two oral tests.

Final exam

It will be carried out in accordance with the regulations in force at Universidade Lusíada de Lisboa.

20. Didactic Resources

The work will be developed with the active participation of students using bibliographical support elements and audio-visual means. At an interactive level, specialist videograms will be used with a three-dimensional presentation and the use of models.

21. Sustainability Objectives

Promote knowledge that contributes to health and well-being.

Raise awareness for a healthy and ecologically balanced living environment.

Ensure an inclusive and quality education for all.

22. Keywords

Anatomy
Physiology
Morphology
Organism
Body



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23. Main Bibliography

Author(s): Seeley, R. R., Stephens, T. D. & Tate, P.
Title: Anatomy and Physiology
Edition: 8^a Year: 2011
Local: New York
Publisher: McGraw-Hill International

Author(s): Espanha, M. M.
Title: Anatomofisiologia. Tomo I: Sistema osteo-articular
Edition: 3^a Year: 2004
Local: Cruz Quebrada
Publisher: FMH

Author(s): Netter, F.
Title: Atlas de Anatomia Humana
Edition: 6^a Year: 2015
Local: Cruz Quebrada
Publisher: Elsevier

24. Complementary Bibliography

Author(s): Correia, P. P., Pascoal, A. G., Silva, P. A. & Espanha, M. M.
Title: Aparelho Locomotor
Edition: 2^a Year: 1998
Local: Cruz Quebrada
Publisher: FMH

Author(s): Pina, J. A. E.
Title: Anatomia Humana da Locomoção
Edition: 5^a Year: 2009
Local: Lisboa
Publisher: Lidel



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Ficha técnica MIP / MIP Datasheet	
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