UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Physiological Anatomy

Academic Year 2025/2026

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. Doutor TIAGO ANDRÉ FREIRE DE ALMEIDA

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

Students in the degree in Sports Organizations Management should acquire technical and scientific competencies regarding the structure and function of the human body, with emphasis on the support structures, joints, and skeletal musculature, as well as body movements applicable to sports practice. Students should understand the organization of the human body and the relationship between bones, joints, and muscles, applying this knowledge in sports contexts.

15. Specific Objectives

1. Know anatomical terminology and identify, locate, and describe relevant bones, joints, and muscles for sports practice;
2. Understand the organization of the musculoskeletal system and the functional relationship between bones, joints, and muscles;
3. Apply concepts of body movements, planes, and axes to the analysis and supervision of physical activities;
4. Explain the role of muscles and joints in locomotion.

16. Skills to be acquired

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1. Identify and describe body planes, basic movements, and the relationship between planes, axes, and body movements;
2. Classify different types of tissues and explain their functions;
3. Understand the skeletal system, cartilages, and basic concepts of bone histology;
4. Know the joints, their classification, receptors, and relationship with body movements;
5. Explain the organization of skeletal musculature, muscle fibers, and motor units.

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

1. General organization of the body and basic kinesiology
1.1. Body planes: sagittal, frontal, and horizontal;
1.2. Basic movements: flexion, extension, abduction, adduction, rotation, pronation, supination;
1.3. Relationship between planes, axes, and body movements;

2. Tissues
2.1. Epithelial tissue: characteristics and functions;
2.2. Connective tissue: characteristics, functions, and main types;
2.3. Muscular tissue: skeletal, smooth, and cardiac;

3. Osteology and bone anatomy
3.1. Functions of the skeleton and body divisions;
3.2. Main bones: long, flat, short, irregular, and sesamoid;
3.3. Cartilages: hyaline, fibrous, and elastic;
3.4. Basic concepts of bone histology;

4. Artrology and joint physiology
4.1. Joint movements and classification of joints;
4.2. Main joints: non-synovial and synovial;
4.3. Joint receptors and basic functions;
4.4. Relation to movements described in kinesiology (flexion, extension, etc.);

5. Myology and skeletal musculature
5.1. Muscle functions and contractile properties;
5.2. Motor unit and muscle fibers: implications for performance;
5.3. Muscle contraction and neuromuscular junction;
5.4. Main muscles and their actions;
5.5. Surface muscle anatomy and relation to body movements.

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19. Assessment Methods

Follows the RGAC currently in force at Univ. Lusíada - Lisboa.

20. Didactic Resources

The work will be developed using specialized bibliography, three-dimensional videograms, anatomical models, multimedia projection (e.g., PowerPoint), interactive study support materials, and the Moodle platform, where complementary content will be made available.

21. Sustainability Objectives

SDG 3 - Good Health and Well-being: Promote knowledge of the structure and function of the human body, contributing to the understanding of movement and healthy physical activity;
SDG 4 - Quality Education: Ensure learning of anatomy and functional physiology in an inclusive, practical, and applied way, developing operational skills;
SDG 11 - Sustainable Cities and Communities: Encourage the analysis of movements and postures that promote safety, accessibility, and quality of life.

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: 8ª Year: 2011
Local: New York
Publisher: McGraw-Hill International
ISBN Code:

Author(s): Correia, P. P. & Espanha, M.
Title: Aparelho Locomotor Volume 1 - Anatmofisiologia dos Sistemas Nervoso, Osteoarticular e Muscular
Edition: 3ª Year: 2020
Local: Cruz Quebrada
Publisher: Edições FMH
ISBN Code:

Author(s): Pascoal, A. G., Espanha, M., Correia, P. P., Oliveira, R. & Freitas, S.
Title: Estudo do Movimento
Edition: 1ª Year: 2022
Local: Cruz Quebrada - Dafundo
Publisher: Edições FMH
ISBN Code:

24. Complementary Bibliography

Author(s): Correia, P. P.
Title: Aparelho Locomotor Volume 2 - Função Neuromuscular e Adaptações à Atividade Física
Edition: 4ª Year: 2021
Local: Cruz Quebrada
Publisher: Edições FMH
ISBN Code:

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

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Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'ANATOMOFISIOLOGIA': Academic Year 2025/2026
Autor / Author	Prof. Doutor TIAGO ANDRÉ FREIRE DE ALMEIDA
Classificação / Classification	-
Descritores / Descriptors	-
Colaborador(es) / Colaborator(s)	-
Data Hora / Date Time	
Formato de dados / Data Format	Texto / Text, PDF
Estatuto de utilização / Usage	Acesso público / Public Access
Relação / Relation	Version 1,0

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