UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Complements of Physiological Anatomy

Academic Year 2024/2025

1. Organic Unit

Faculty of Business and Economic Sciences

2. Course

Sport Organization Management

3. Cycle

1st

4. Course Unit

Complements of Physiological Anatomy (C1113)

5. Scientific Area

6. Curricular Year

2nd

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

To continue the contents developed in anatomophysiology in the acquisition of technical and scientific competences on the knowledge of the structure and function of the body and its parts. In this curricular unit, the student should know the systems of integration, control, regulation and maintenance of homeostasis.

15. Specific Objectives

1. Identify and locate the anatomical structures involved in the integration, regulation and maintenance of internal organic life;
2. Understand the functioning of the units that structure the internal organic life;
3. Know the functional organization of each system and between the different systems in response to changes in the organic environment and the contribution to homeostasis;
4. Integrate knowledge of anatomy and physiology.

16. Skills to be acquired

Understand the functional organization and mechanisms of integration and control of the nervous system; describe movement actions.
It should also understand the role played by the SNC and Autonomous in presiding over the mechanisms underlying the other bodies.
The student will have to identify the different organs and systems of the human body, as well as know their functionality and interorganicity.

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17. Teaching Methodology

The procedure will be similar to that presented in the curricular unit of anatomy and physiology. Expository and interactive classes will be held during the extensive curriculum organization by content. The intensive analysis will resort to the practical - pedagogical exercises carried out in the classroom defined through the support literature. In this way, it is intended to overcome critical aspects of a curriculum centered on contents, aiming at the acquisition of fundamental skills and criti

18. Course Unit Program

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1. Nervous System.
1.2. Functional Organization of the Nervous System.
1.3. Histology: Neuron and glial cells; central and peripheral nervous system cells.
1.4. Electrical Signals and the Action Potential: Phases of the Action Potential.
1.5 Absolute and relative refractory period.
1.6 Spatial and temporal summation.
1.7 The brain: Embryonic development of the brain.
1.8. General organization of the brain.
1.9. The brainstem: Spinal bulb, annular protuberance, cerebral peduncles and quadrigeminal lamina and reticulate substance.
1.10. Cranial nerves.
1.11. The thalamus, hypothalamus and epithalamus.
1.12. The cerebellum.
1.13. Reticular modeling systems.
1.14. Ascending and descending nerve tracts.
1.15. Limbic System.

2. Endocrine system:
2.1. Characteristics;
2.2. pituitary gland and the hypothalamus;
2.3. Thyroid and parathyroid;
2.4. Adrenals;
2.5. Pancreas;
2.6. reproductive system;
2.7. Pineal Body;
2.8. Thymus.

3. Cardiovascular system:
3.1. Blood composition;
3.2. Blood groups;
3.3. Anatomy of the heart and cardiac cycle;
3.4. Histology of the heart;
3.5. Electrical activity of the heart;
3.6. Arterial and venous branches.

4. Respiratory system:
4.1. Anatomy and histology of the respiratory system;
4.2. Laws and mechanism of breathing;
4.3. Volumes and capacities;
4.4. Exchange and transport of gases.

5. Digestive system:
5.1. Anatomy and histology of the digestive tract;

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5.2. Gastric secretion and production of hydrochloric acid;
5.3. duodenum and pancreas;
5.4. Liver and gallbladder;
5.5. Large intestine.

6. Urinary system:
6.1. Anatomy of the urinary system;
6.2. Internal constitution of the kidneys;
6.3. Nephron: Functional unit of the kidney;
6.4. Juxtaglomerular apparatus;
6.5. Tubular system;
6.6. Functions of the urinary system.

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 written 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
Systems
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		

Author(s):	Pina, J. A. E		
Title:	Anatomia de Humana dos Órgãos		
Edition:	2ª	Year:	2010
Local:	Lisboa		
Publisher:	Lidel		

Author(s):	Greenstein, Ben & Greenstein Adam		
Title:	Color Atlas of Neuroscience		
Edition:		Year:	2000
Local:	USA		
Publisher:	Thieme Verlag		

24. Complementary Bibliography

Author(s):	Espanha, M, Correia, P. P., Pascoal, A. G., Silva, P. A. & Oliveira, R.		
Title:	Anatomofisiologia. Funções da Vida Orgânica Interna. Tomo III		
Edition:		Year:	2001
Local:	Cruz Quebrada		
Publisher:	FMH		

Author(s):	R. Putz & R. Pabzt		
Title:	Sobotta - Atlas of Human Anatomy 3 vol.		
Edition:	23ª	Year:	2013
Local:	Rio de Janeiro		
Publisher:	Guanabara Koogan.		

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Ficha técnica MIP / MIP Datasheet	
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Autor / Author	Prof. Doutora EMA ADELAIDE CASTRO MENDES CARVALHO DE BRITO AZEVEDO
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