POLI ESCOLA SUPERIOR SAÚDE TÉCNICO GUARDA	**SUBJECT DESCRIPTION**	**MODELO** PED.015.03

Course	**Pharmacy**					
Subject	**Anatomy and Physiology**					
Academic year	2023/2024	*Curricular year*	1st	*Study period*	2nd semester	
Type of subject	Compulsory	*Student workload (H)*	Total: 162	Contact: T: 45; TP: 22,5; PL: 15	*ECTS*	6
Professor(s)	Elsa Maria Pereira de Oliveira Cardoso e Telma Quintela Paixão					
☒ *Area/Group Coordinator* ☐ *Head of Department* *(select)*	Elsa Maria Pereira de Oliveira Cardoso					

PLANNED SUBJECT DESCRIPTION

1. LEARNING OBJECTIVES

O1 - Describe the anatomy of the major systems and organs of the human body;

O2 - Acquire physiology knowledge, in order to improve the understanding of the structure and function of tissues, organs, and human body systems;

O3 – Identify the application of fluid dynamics and osmotic phenomena in blood circulation;

O4 - Apply concepts of mechanics, waves, electricity and radiobiology to examples related to biological systems;

O5 - Develop the construction of critical thinking in areas of Anatomy and Human Physiology.

2. PROGRAMME

Theoretical program

1) Organization of the Human Body

- Introduction to the study of Anatomy. Anatomical terminology.

2) Support and Movement

- Integumentary system.

- Osteology and arthrology.

- Myology. Bioelectricity of biological systems.

- Myology. Gross anatomy and physiology of movement.

3) Integration and Control Systems

- Nervous System. Neurophysiology.

- The Senses. Sounds and bioacoustics.

- Endocrine System.

4) Regulation and Maintenance

- Blood.

- Cardiovascular system. Biophysics circulation.

- Lymphatic system.

- Respiratory system.

- Digestive system.

- Urinary system.

5) Reproduction

- Female and Male Sexual and Reproductive System.

6) Biological effects of ionizing radiation

Laboratory practical program

1) Anatomy of locomotion: bones and muscles.

2) Anatomy of the nervous system.

3) Anatomy of the heart and blood vessels.

4) Anatomy of the organs of other systems: respiratory, digestive, urinary, and reproductive.

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

With the study of the different programme contents, it is intended to attain the proposed objectives by promoting integration of knowledge of anatomy and physiology, facilitating their learning, and providing a multidisciplinary view. With the points 1) to 5) it is intended to attain the objective O1; with the points 2) to 5) the O2 and its integration with O3 and O4; with all points it is intended to attain the O5.

This CU also will promote the responsibility of the student in the manipulation of anatomical models, as well as the interest in autonomous and group learning, anticipating real representations, allowing the student to master the anatomical terminology and had a precise notion of the descriptive and topographic anatomy of the structures of the human body.

4. MAIN BIBLIOGRAPHY

Moore K. L., Dalley, A. F. & Agur A. M. R. (2014). Anatomia orientada para a clínica (7ª edição). Nova Guanabara.

Netter, F. H. (2008). Atlas de Anatomia Humana (4ª edição). Elsevier.

VanPutte, C. L., Regan, J. L., Russo, A. F. (2016). Anatomia e Fisiologia de Seeley (10ª edição). Mac GrawHill. ISBN: 9788580555882

Slides, Theoretical-Practical Sebenta and Practical Sebenta prepared by the teachers.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The CU includes T, TP and PL components. The T and TP evaluation have a weighting of 85% and the PL evaluation has a weighting of 15% in the final average. The T and TP components will include continuous evaluation (85%) consisting of 2 written tests, with a weighting of 42.5% each in the final average. The PL evaluation will consist of evaluating the ability to identify various structures of the human body in a written test (15%).

Failure to be approved during continuous assessment implied taking an exam that included all syllabus and is the final classification (100%).

The approval of CU was achieved with a final grade of at least 9.5, on a scale 0-20.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The teaching methodologies will be consistent with the objectives of the CU. Theoretical lectures with a more expositive methodology, although always participative, will be the first approach of the contents, where students will be encouraged to ask questions, and make reasoning based on the knowledge they acquired during the semester, will be essential to achieve the objectives related to knowledge and memorization of concepts. On the other hand, in the TP classes where exercises will be solved, practical cases will be discussed and documents analyzed, related to knowledge acquired in lectures, enabling a continuous critical thinking in problem solving, were important to achieve the objectives related with programme content taught.

PL classes, using anatomical models and anatomical images, atlases, and videos, will allow the simulation of contexts and anticipate real representations, allowing the student to master anatomical terminology and had a precise notion of descriptive and topographical anatomy of the constituent structures of the human body.

The gradual and sustained consolidation of knowledge according to a continuing learning model will improve the perception of the impact of CU on professional practice.

7. ATTENDANCE

Approval in this curricular unit (continuous assessment or final exam) will require attendance, with a minimum mandatory attendance of 75% in theoretical-practical and practical classes. Students with Statutes and Special Conditions (e.g., student worker status) will be governed by the privileges provided by the legislation.

8. CONTACTS AND OFFICE HOURS

Elsa Cardoso; elsa.cardoso@ipg.pt; Office 4; Office Hours: Tuesday: 9:30-10:30h; Wednesday: 11:30-13:30h; Thursday: 11:00-13:00h

Telma Quintela; tquintela@ipg.pt; Office 12; Office Hours: Tuesday: 9:30-10:30h and *12h30-13h30*; Wednesday: 16-17h; Thursday: 13-14h

DATE

27 de fevereiro de 2024

SIGNATURES

Professor(s), Area/Group Coordinator or Head of Department signatures

Professor

Assinado por: **TELMA ALEXANDRA QUINTELA PAIXÃO**
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Area/Group Coordinator

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