

## Course Unit: 400337 - Anatomophysiology II

Year 1 Semester 2 ISCED Code: 0511 ECTS: 6

Type of Course Unit: Compulsory Delivery Mode: Face-to-face Language of Instruction: Portuguese

COURSE COORDINATOR: Ana Isabel Ferreira

### HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
150	50	25	-	-	-	-	-	-	75

Prerequisites (if applicable):

### LEARNING OUTCOMES (knowledge, skills and competence)

It is intended that the student has achieved the following objectives:

- Recognize the importance of Anatomopathological Physiology in Occupational Therapy
- Learn about the external and internal anatomy of the human body; in particular the nervous system, systems maintenance and support of life, the endocrine system and the reproductive system
- Know the specific physiological processes of organs and body systems; in particular the nervous system, systems maintenance and support of life, the endocrine system and the reproductive system
- Explain the specific physiological processes of each studied organizational structure;
- Meet in an integrated way, the structure and physiology of the human body, with the central reference the locomotor system;
- Develop the skills of interpretation, analysis and intervention in the physiological phenomena inherent in the exercise.

### CONTENTS

#### 1. Nervous System

1.1. Anatomical and functional organization of the nervous system

1.2. Morphology and physiology of the neuron

1.3. Synaptic communication

1.4. Central Nervous System:

- organization and general functions;

- meninges and cerebrospinal fluid;

spinal cord

- structures and organization of the midbrain, diencephalon and cerebral cortex;

- driving routes: ascending and descending

1.5. Peripheral Nervous System - general organization; nerve ganglia, cranial nerves, and spinal nerves; nerve plexus.

1.6. Autonomic Nervous System: sympathetic nervous system and parasympathetic nervous system.

2. Organs of the senses: touch, smell, taste, sight, hearing, vestibular and proprioception:

- 2.1. Sensory receivers, Main functions, Operation, Driving directions
3. Circulatory and lymphatic system
4. Respiratory System
5. Digestive System
6. Urinary System
7. Endocrine System
8. Reproductive System

### **DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES**

This curricular unit includes the study of human body from a global and integrative perspective, in order to allow the seizure of a vision that as a complex multi-system whose overall performance depends directly on the operation of each of its parts.

The definition of the contents of this course took into account its continuity with the course of Anatomophysiology I, focusing on the study of maintenance and life support systems, the control of the internal environment and reproduction.

### **TEACHING METHODOLOGIES**

- Oral presentation of content with multimedia projector feature
- Observation, interpretation and manipulation of anatomical models
- Search for bibliographical information online and in paper form

### **DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES**

Demonstrate knowledge and understanding of the structures and functions of the human body for biological and physical level.

Understand how structures and functions of the human body for biological and physical level interfere with the performance of the activity and task

### **EVALUATION METHODS**

Continuous Assessment (CA) - 2 individual written tests - minimum admissible 8 points and 1 group work (written and oral presentation in the classroom), with minimum admissible rating of 8 points. UC approval: minimum grade of 10 points, in the weighted average of the written tests and group work. Only the final UC classification is obtained by rounding.

Final Assessment in normal season (NS) - Applies to students who do not opt for CA. Individual written test that focuses on all contents taught in the UC, minimum admissible rating: 10 points. Only the final UC classification is obtained by rounding.

Final Assessment at Resource Season (RS) - Applies to students who have not passed the CA and the Final Assessment in NS (same typology of NS assessment methods); Minimum admissible rating: 10 points for each assessment method. Improvements are contemplated in RS.

### **MAIN BIBLIOGRAPHY**

- Damasio, A. (2004). *O sentimento de si: o corpo, a emoção e a neurobiologia da consciência*. Mem Martins: Europa - América.
- Damasio, A. (2001). *O erro de Descartes: emoção, razão e cérebro humano*. Mem Martins: Europa-América.
- Esperança Pina, J. A. (2009). *Anatomia humana da relação (4ª edição)*. Lisboa: Lidel.
- Guyton, A., & Hall, J. (1996). *Tratado de fisiologia médica*. Madrid: McGraw-Hill.
- Hansen, J. (2003). *Atlas de Fisiologia Humana de Netter*. Portalegre: Artmed.
- Hutchinson, M. (2014). *Abrief atlas of the human body*. San Francisco: Pearson.
- Marieb, E., & Hoehn, K. (2014). *Human Anatomy & Physiology*. San Francisco: Pearson.
- Nanputte. C., Takahashi, K., Pizzolato, S., & Mauricio, K. (2016). *Anatomia e Fisiologia*. Porto Alegre: Artmed.

