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|---------------------------|--|---------------|----------------|---|-----|
| Course Unit               | Functional Anatomy                       |               | Field of study | Sport Sciences                                      |     |
| Bachelor in               | Sports - Minor in Recreation and Leisure |               | School         | School of Education                                 |     |
| Academic Year             | 2022/2023                                | Year of study | 1              | Level   | 1-1 |
| Type                      | Semestral                                | Semester      | 1              | ECTS credits  | 7.0 |
| Workload (hours)          |  | 189           | Contact hours  | T 43   TP 35   PL -   TC -   S -   E -   OT 3   O - |     |
| Code: 9563-625-1101-00-22 |  |               |                |   |     |

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) **Pedro Miguel Queirós Pimenta Magalhaes**

### Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Accurately analyze and interpret the osteoarticular, muscular, nervous and endocrine systems.
2. Understand and describe the human motion in connection with acquired theoretical content.
3. Understand and describe the most important muscles involved in different types of human movements and physical activities.
4. Demonstrate knowledge about the description method organization and the correct terminology used in its approach.

### Prerequisites

Not applicable

### Course contents

Osteology: Descriptive and systematic standards; Anatomical reference position; Human skeleton; Bone tissue; Appendicular skeleton; Axial skeleton. Artrology: Joints classification; Joints of lower limb; Joints of the spine. Miology: Joints actions; Muscles regions; Origin and distal insertions and function of different muscles. Nervous system: General organization; The neuron; Description of the components involved in motor action. Endocrine system: General organization.

### Course contents (extended version)

1. Osteology:
  - Descriptive and systematic norms;
  - The bone tissue;
  - Processes of bones growth and development;
  - Bones classification;
  - Reference anatomical position;
  - Descriptive analysis of appendicular and axial skeleton.
2. Artrology:
  - Functional and morphological classification;
  - Structural components of the joints;
  - Specific approach of some joints.
3. Miology:
  - Muscle insertions;
  - Muscles actions.
4. Nervous system:
  - General organization;
  - Components of the nervous system.
5. Endocrine system:
  - General organization;
  - Places of hormone production.

### Recommended reading

1. PINA, JA (2015): Anatomia humana da locomoção. 5ª Edição. LIDEL.
2. NETTER, FH (2018): Atlas de anatomia humana. 7ª Edição. Elsevier.
3. SOBOTTA, J (2018): Atlas de anatomia humana. R. Putz e R. Pabst (Eds. ). 24ª Edição. Nova Guanabara.
4. ESPANHA, M (2008): Anatomofisiologia. Sistema osteo-articular. 5ª Edição. FMH Edições.
5. NEUMANN, DA (2021). Cinesiologia do aparelho musculoesquelético. Fundamentos para a reabilitação. (3ª Edição). Guanabara Koogan. ISBN: 978-85-352-8755-4.

### Teaching and learning methods

Oral exposure and by multimedia means. Acquired knowledge application in activities like: work sheets; learning situations development.

### Assessment methods

1. Continuous assessment - (Regular, Student Worker) (Final)
  - Intermediate Written Test - 70% (2 written tests (equal weight))
  - Practical Work - 20% (1 group work)
  - Experimental Work - 10% (Content consolidation work and assiduity)
2. Final evaluation - (Regular, Student Worker) (Supplementary, Special)
  - Final Written Exam - 100% (1 written test)

### Language of instruction

Portuguese

## Electronic validation

|  |                                 |                                  |                              |
|--|---------------------------------|----------------------------------|------------------------------|
| Pedro Miguel Queirós Pimenta Magalhaes | Pedro Miguel Monteiro Rodrigues | Catarina Margarida Silva Vasques | Carlos Manuel Costa Teixeira |
| 03-01-2023                             | 19-01-2023                      | 19-01-2023                       | 20-01-2023                   |