



Universitat de Lleida

DEGREE CURRICULUM

# HUMAN BODY'S STRUCTURE 1

Coordination: AIGUADE AIGUADE, RAMON

Academic year 2023-24

## Subject's general information

|  |   |        |             |                  |
|--|---|--------|-------------|------------------|
| Subject name   | HUMAN BODY'S STRUCTURE 1  |        |             |                  |
| Code   | 102700  |        |             |                  |
| Semester   | 1st Q(SEMESTER) CONTINUED EVALUATION  |        |             |                  |
| Typology   | Degree  | Course | Character   | Modality         |
|  | Bachelor's Degree in Physiotherapy  | 1      | COMMON/CORE | Attendance based |
|  | Double bachelor's degree: Degree in Nursing and Degree in Physiotherapy   | 1      | COMMON/CORE | Attendance-based |
|  | Double bachelor's degree: Degree in Physical Activity and Sports Sciences and Physiotherapy   | 1      | COMMON/CORE | Attendance-based |
| Course number of credits (ECTS)  | 9   |        |             |                  |
| Type of activity, credits, and groups                                    | Activity type   | PRAULA |             | TEORIA           |
|  | Number of credits   | 4.5    |             | 4.5              |
|  | Number of groups  | 3      |             | 1                |
| Coordination   | AIGUADE AIGUADE, RAMON  |        |             |                  |
| Department   | NURSING AND PHYSIOTHERAPY   |        |             |                  |
| Teaching load distribution between lectures and independent student work | Learning anatomy must be done in a continuous way. The work of the student beyond class hours is fundamental to guarantee the success of the learning and to overcome the subject. It proposes an autonomous work of the student of at least 50% of the theoretical and practical class time. |        |             |                  |
| Important information on data processing                                 | Consult <a href="#">this link</a> for more information.   |        |             |                  |
| Language   | Català/castellano   |        |             |                  |
| Distribution of credits  | The subject has 9 ECTS. The fact of being a subject with a high teaching load allows to raise participatory classes, where the student is the protagonist of the learning.  |        |             |                  |

| Teaching staff         | E-mail addresses       | Credits taught by teacher | Office and hour of attention |
|------------------------|------------------------|---------------------------|------------------------------|
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| MORENO FORTES, NICOLAS | nicolas.moreno@udl.cat | 7                         |                              |

## Subject's extra information

This is a fundamental subject and is conceived as a practical subject in which the anatomy is deepened with a dynamic and participatory methodology of the student.

During the course different practices are developed between which we emphasize activities in the classroom, classes of palpation, osteotheca classes and classes of dissection of corpse

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These images are only used to teach, evaluate the knowledge of the subject and for educational improvement projects.

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## Learning objectives

### General objective:

Integrate the anatomy to the clinical practice of physiotherapy and the respective double degrees.

### Specific objectives:

- Identify the anatomical structures of the human body
- Learn the nomenclature of the human body from a technical and professional setting
- Understand the organization of the human body from the cell to the different systems
- Describe the morphology of the apparatuses and systems of the human body: locomotor, cardiovascular, respiratory, renal, digestive, endocrine, urogenital and nervous.
- Determine the principles of functional anatomy that facilitate movement in each joint

- Describe the main anatomical structures of the different apparatuses and systems and especially the locomotor apparatus of the Upper Extremity and spine (I)
- Identify the anatomical structures of the human body by palpation of the upper limb and spine (I)
- Recognize the different tactile forms applied in physiotherapy
- Learn how to use the different sources of human anatomy consultation

## Competences

### **Specific competences of the Degree:**

CE1 To know and understand the morphology, physiology, pathology and behavior of people, both healthy and ill, in the natural and social environment.

#### **Learning outcomes:**

1.1 Identify and describe the elements that constitute the morphology of the human being.

1.2 Differentiate each of the components of the human being from its biochemical level to its systemic level, and its possible alterations

1.3 Recognize the elements that constitute the morphology of the human being through the practical palpation of living subjects

CE2 Know the structure of the human body from the molecular level to the complete organism, in the different stages of life

#### **Learning outcomes:**

1.1 Identify and describe the elements that make up the structure of the human being.

1.2 Differentiate each of the components of the human being from the molecular level to the complete organism.

1.3 Recognize the elements that constitute the structure of the human being through the practical palpation of living subjects

CE2 Know and understand the sciences, models, techniques and instruments on which the physiotherapy is founded, articulated and developed.

#### **Learning outcomes:**

2.1 Understand the general theories, basic and proper of Physiotherapy.

2.5 Know how to use the most common health terminology among health professionals, applied to the physiotherapy model.

CE3 Understand and understand physiotherapeutic methods, procedures and performances, aimed at both the therapeutic technique applied to the pre-education or functional recovery clinic, as well as activities aimed at the promotion and maintenance of health.

#### **Learning outcomes:**

3.2 Recognize the general and specific procedures of Physiotherapy.

3.7 Identify the physiological and structural changes that may occur as a result of physiotherapy intervention

### **Double degree in Human Nutrition and Dietetics and Physiotherapy:**

CE4 To know the structure of the human body from the molecular level to the whole organism, in the different stages of life.

Learning outcomes:

4.1 Identify and describe the elements that constitute the structure of the human being.

4.2 Differentiate each of the components of the human being from the molecular level to the systemic level in the different stages of life.

4.3 Recognize the elements that constitute the morphology of the human being through the practical palpation of living subjects.

## **GENERAL COMPETENCES OF THE DEGREE**

CG1 Communicate effectively and clearly, both orally and in writing, with the users of the healthcare system as well as with other professionals

CG4 Respect for the fundamental rights of equality between men and women, for the promotion of Human Rights and the values of a culture of peace and democratic values.

## **Strategic competences of the University:**

CEUdL1 Adequate understanding and oral and written expression of Catalan and Spanish;

CEUdL2 Significant command of a foreign language, especially English;

CEUdL3 Training in the use of new technologies and information and communication technologies;

CEUdL4 Basic knowledge of entrepreneurship and professional environments;

CEUdL5 Essential notions of scientific thought.

## Subject contents

- THEME 1: Fundamentals and generalities of human anatomy
- THEME 2: General organisation of the human body: The cell: study of the organelles and cell compartments
- THEME 3: The basic tissues. Morphological characteristics
- THEME 4: The joints. Type, function and classification.
- THEME 5: Osteology and arthrology of the shoulder girdle and upper limb
- THEME 6: Myology of the shoulder girdle and upper limb.
- THEME 7: Osteology of the trunk and skull: Skull bones: overview, type of vertebra, characteristics of the vertebrae according to regions
- THEME 8: Arthrology and myology of the head and neck
- THEME 9: Vascularisation and innervation of the upper limb: Brachial plexus, upper limb vessels.
- THEME 10: Palpatory anatomy of the skull, spine, ribcage and pelvis
- THEME 11: Palpatory anatomy of the upper limb
- THEME 12: Devices and systems of the human body. Structural anatomical vision of them
- THEME 13: Liquids and blood of the human body

## Methodology

In this subject, the student is the protagonist of the continuous learning throughout the course. During the course,

theoretical and practical classes will be combined

The practical classes will be fundamentally palpatory, although practical seminars will also be carried out with classroom exercises, osteoteca sessions and corpse dissection sessions

Attendance to group classes is compulsory to be able to pass the subject

The classes of a large group will be basically descriptive but requesting the participation of the students. Class activities will be performed as a visualization of dissection images to identify muscle and joint structures. Likewise, classroom activities are proposed to facilitate and integrate learning and will have complementary material outside of notes or slides worked in the classroom.

The classes of small group will be devoted essentially to palpation, osteoteca and cadaver dissection. For classes of small group it will be essential to respect the regulations of the different classes such as dissection, osteoteca and palpation. Other activities in the classroom are also planned that allow better learning such as description of bone in osteoteca, explanation of a region for peers and dissection.

For the classes of palpation students will have a list of structures to explore (non-exhaustive list) that will facilitate and guide the matter that is subject to examination.

## Development plan

The subject will be developed through master classes where the whole theoretical part of the syllabus and mainly practical seminars will be taught where it will be taught to feel the different structures studied in the theoretical part.

## Evaluation

The evaluation of learning will be done as follows:

1. **EVALUATION:** The final grade of the subject will consist of 3 evaluation activities:
  - **EXAMINATION THEORY:** The theoretical and practical knowledge of anatomy, including seminars contents and transversal competences, will be evaluated through a theoretical exam that will count 45% of the final grade. 50-question test, with 5 possible options, of which only 1 is correct. Every 3 wrong questions, subtract one correct.
  - **PRACTICAL EXAM:** The practical and theoretical knowledge of anatomy, including the contents of the seminars, transversal competences, will be evaluated through an oral exam that will count 45% of the final grade. This exam includes 6 short questions of structures and 1 question about the description of an area. The evaluation procedure will be adapted to the regulations of the UdL and in particular of the FIF, this exam will be supervised by two professors of the subject or it will be recorded, in order to make revisions if necessary.
  - **GROUP WORK:** This work will consist in the oral presentation of the different anatomical systems, each group will choose an area and they will have to present orally in class. This activity will count 10% of the final grade of the subject. During the presentation group questions will be asked and the teacher will evaluate the quality of the presentation.

The final score will come out of the 3 exam marks, average according to the percentage weight in the subject, it is necessary to obtain at least 50% of the maximum possible score globally, although to be able to make the percentage averages necessary to have obtained, at the individual level, at least 50% of the grade in the theoretical exams and 50% in the practical exam.
2. **EVALUATION IN 2nd CALL**
  - It is scheduled after the first call and it can be done by both the suspended students and those approved with the intention of uploading a grade, but in this case the approved resigns to the first call and will only count the second grade, being able to suspend if in the second call the note is a suspense although in the first one it had approved.
  - In the case of suspending any of the 2 exams (theory or practice) the whole subject is suspended and the student must enroll and take the complete subject. In this case it is not possible to save any notes of the partial exams for other registrations.

### 3. Unique evaluation:

Those students who request, in the corresponding terms, may opt for the single evaluation. This evaluation will be by attending the theoretical and practical exams in the first call, on the official dates assigned to them, and with the same scoring rules indicated for the rest of the students.

## Bibliography

### Bibliography and resources

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- Tixa S. Atlas de Anatomía Palpatoria del Cuello, Tronco y de la Extremidad Superior. Masson: 2.007
- Hochschild, J. Anatomía funcional para fisioterapeutas. 1a ed. Manual Moderno; 2017
- Cael, C. Anatomía Funcional: estructura, función y palpación del aparato locomotor para terapeutas manuales. 1a ed. Buenos Aires. Médica Panamericana; 2013
- Welsch U. Histología de Sobotta. Madrid. Médica Panamericana; 2.009
- Sobotta J. Atlas de Anatomía Humana. Madrid. Médica Panamericana; 2.006
- Rohen J, Yokochi C, Lütjen-Drecoll E, 6ª ed. Madrid. Elsevier Science; 2.007.
- Abrahams P, Marks S, Hutching R. Gran Atlas Mc Minn de Anatomía Humana. Barcelona. Océano Mosby; 2.005.
- Drake R. Gray: Anatomía para estudiantes. Madrid. Elsevier, 2.005
- Rouvière H. Anatomía Humana. 11ª ed. Barcelona. Masson: 2.005
- Schüncke, M. Prometheus. Texto y Atlas de Anatomía. Buenos Aires. Médica Panamericana. 2.006
- Testut L. Compendio de Anatomía Descriptiva. Barcelona. Masson; 1.996
- Williams P. Anatomía de Gray. Madrid. Churchill Livingstone; 1.998
- Lippert H. Anatomía: estructura y Morfología del Cuerpo Humano. Madrid. Marban; 2.005

### ENLLAÇOS D'INTERÉS EN ANATOMIA

#### **Recursos generals d'anatomia. Atles i llibres on-line**

- <http://www.medicalstudent.com>
- <http://anatomy.uams.edu/anatomyhtml/gross.html>
- <http://www.anatomyatlases.org/AnatomicVariants/AnatomyHP.shtml>
- <http://www.bartleby.com/107/> (Gray's Anatomy)

#### **Cross section**

- [http://www.lumen.luc.edu/lumen/meded/grossanatomy/x\\_sec/mainx\\_sec.htm](http://www.lumen.luc.edu/lumen/meded/grossanatomy/x_sec/mainx_sec.htm)
- <http://www.anatomyatlases.org/HumanAnatomy/CrossSectionAtlas.shtml>

#### **Radiological Anatomy**

- <http://classes.kumc.edu/som/radanatomy/>
- <http://www.rad.washington.edu/anatomy/index.html>
- <https://www.radiology.wisc.edu/education/resources/learning-materials/>