1. OVERVIEW

Subject Area	Human Anatomy
Degree	Bachelor's Degree in Human Nutrition and Dietetics
School/Faculty	Faculty of Biomedical Sciences
Year	First
ECTS	6 ECTS (150 h)
Type	Compulsory
Language(s)	Spanish
Delivery Mode	On-campus and blended
Semester	Semester 1
Coordinating professor	Raquel Frías García

2. INTRODUCTION

The aim of this subject area is to provide students with access to basic and applied knowledge of general anatomy, specifically the structure of the human body, the basic functions in which the structures of the human body are involved, as well as the major practical applications of descriptive and functional anatomy for graduates in Human Nutrition and Dietetics. The main focus will be the structures related to ingestion, swallowing and digesting food (the digestive system), respiratory processes, the circulatory system, the endocrine system, the musculoskeletal system and the nervous system. This will allow future experts in Human Nutrition and Dietetics to understand the role of the human body when it comes to food and nutrition. Given the professional healthcare profile of nutritionists and dietitians, they must be able to carry out tasks that benefit people's health and wellbeing, including the prevention of diseases that affect different organ systems and the exchange of information with other health professionals.

This subject area is worth 6 ECTS credits, equivalent to 150 hours of work in-person and self-study from the student. It is delivered in the first semester of the first year of the degree. It is part of Module 1, specifically the core subject of 'Structure and Function of the Human Body'. As a core subject area, Anatomy is also related to other core compulsory subject areas in the curriculum which must be delivered according to a coordinated, coherent timeline to ensure students acquire the professional skills required of graduates in Human Nutrition and Dietetics. These other core subject areas are Biology, Biochemistry and Physiology (first semester), which form part of the core training of the degree.

Students are encouraged to actively participate in theory classes contents, practicals, workshops, tutorials and seminars in order to successfully achieve the intended skills and learning outcomes of the subject area. Online attendance to the seminars and workshops is recommended in order to gain more in-depth, specific knowledge of anatomy relating to the structure of the heart, the process and function of mastication, the digestion process and the innervation of the human body for its correct functioning.

The subject area 'Human Anatomy' has therefore been designed from a theoretical and practical point of view, which will place students at an advantage when faced with real cases, as they will be equipped with the knowledge and skills needed to exercise their future profession.

3. SKILLS AND LEARNING OUTCOMES

Key skills (CB, by the acronym in Spanish):

- CB1: Students have shown their knowledge and understanding of a study area that builds on general secondary school education, and are usually at the level where, with the support of more advanced textbooks, they may also demonstrate awareness of the latest developments in their field of study.
- CB2: Students can apply their knowledge to their work professionally and possess the necessary skills, usually demonstrated by forming and defending opinions, as well as resolving problems within their study area.
- CB4: Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

General skills (CG, by the acronym in Spanish):

- CG14: Apply scientific knowledge of physiology, pathophysiology, nutrition and food to dietary planning and advice for individuals and groups of all ages, including both healthy and unwell people.

Cross-curricular skills (CT, by the acronym in Spanish):

- CT4: Adaptability: ability to detect, interpret and respond to a changing environment. Ability to equip themselves and work effectively in different situations and/or with different groups or individuals. This means adapting to change depending on circumstances or needs. It involves the confidence to take on crucial challenges on a personal or group level, maintaining good physical and mental health to allow effective work to be carried out.
- CT6: Problem solving: ability to solve an unclear or complex issue or situation which has no established solution and requires skill to reach a conclusion.
- CT9: Ability to put knowledge into practice, using the skills acquired in the classroom to mock situations based on real life experiences that occur in the relevant profession.

Specific skills (CE, by the acronym in Spanish):

- CE1: Know the foundations of human anatomy.
- CE2: Master the terminology used to talk about functional anatomy.
- CE3: Be familiar with the major anatomical structures that make up the apparatuses and systems of the human body.
- CE4: Master the morphological foundations of basic scans.

Learning outcomes (RA, by the acronym in Spanish):

- RA1: Learn about and demonstrate knowledge of the structure and functioning of the human body on a holistic level.
- RA2: Know how to properly and accurately use human anatomy terminology.

- RA3: Apply theoretical and practical knowledge of anatomy in medical disciplines.

The following table shows how the skills developed in the subject area match up with the intended learning outcomes:

Skills	Learning outcomes
CB1, CT6, CT9, CE1, CE2, CE3, CE4.	RA1: Learn about and demonstrate knowledge of the structure and functioning of the human body on a holistic level.
CB1, CB2, CB4, CT6, CT9, CE1, CE2, CE4, CE3.	RA2: Know how to properly and accurately use human anatomy terminology.
CB1, CB2, CB4, CT6, CT9, CE1, CE2, CE3.	RA3: Apply theoretical and practical knowledge of anatomy in medical disciplines.
CB1, CT6, CT9, CE1, CE2, CE3, CE4.	RA1: Learn about and demonstrate knowledge of the structure and functioning of the human body on a holistic level.
CB1, CB2, CB4, CT6, CT9, CE1, CE2, CE4, CE3.	RA2: Know how to properly and accurately use human anatomy terminology.

4. CONTENTS

The subject area is divided into 6 units, which are then divided into several topics:

Unit 1. Introduction to General Anatomy.

- Topic 1. Definitions, objectives and classifications of human anatomy.
- Topic 2. Levels of organisation of the human body.
- Topic 3. Bodily fluids.
- Topic 4. Anatomical position, orientation, axes and planes.
- Topic 5. Regions, membranes and cavities of the body.

Unit 2. Central and peripheral nervous system.

- Topic 1. The central nervous system: brain, spinal cord and meninges.
- Topic 2. The Peripheral nervous system: Spinal and cranial nerves.
- Topic 3. Autonomic/vegetative nervous system and visceral innervation.
- Topic 4. The endocrine system.

Unit 3. The digestive system.

- Topic 1. General aspects of the digestive system.
- Topic 2. Anatomy of mastication and swallowing.
- Topic 3. Anatomy of digestion and intestinal transit.
- Topic 4. General aspects of the urinary/excretory and reproductive systems.

Unit 4. Circulatory systems and apparatuses.

- Topic 1. The circulatory system and lymphatic system.
- Topic 2. The respiratory system and cardiovascular system.

Unit 5. Bone, joint and musculotendinous system.

- Topic 1. General aspects of the locomotor system.
- Topic 2. Bone, joint and muscle system of the head.
- Topic 3. Bone, joint and muscle system of the chest, abdominal region and posterior trunk.
- Topic 4. Arthrology and myology of the appendicular skeleton (upper and lower limbs).

Unit 6. Practical applications of anatomy to human nutrition for a healthier lifestyle.

- Topic 1. Body types and composition.
- Topic 2. Anthropometric and medical applications of anatomy in human nutrition.
- Topic 3. 'NutriACTION'.

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

- Lecture
- Learning based on workshops/labs
- Collaborative learning
- Case studies
- Simulated environments

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

On campus:

Learning activity	Number of hours
Lecture	50 h
Independent working	37.5 h
Workshops and/or lab work	18 h
Practical exercises	12.5 h
Group activities	14 h
Tutorials	14 h
Knowledge test	4 h
TOTAL	**150 h**

Blended learning

Learning activity	Number of hours
Reading of content	18.5 h.
Online seminars	10 h.
Independent working	55.5 h.
Workshops and/or lab work	17 h.
Practical exercises	12.5 h.
Group activities	14 h.
Online tutorials	17.5 h.
Knowledge tests	5 h.
TOTAL	**150**

7. ASSESSMENT

The assessment methods, together with their respective weighting towards the final grade for the subject, are as follows:

On campus:

Assessment method	Weighting
Knowledge test	50%
Laboratory work	30%
Learning portfolio	10%
Performance observation	10%

Blended:

Assessment method	Weighting
Knowledge test	50%
Laboratory work	20%
Learning portfolio	20%
Performance observation	10%

On the Virtual Campus, when you open the subject area, you can see all the details of your assessment activities, including the deadlines and assessment procedures for each activity.

8. BIBLIOGRAPHY

The reference work for following this subject area is:

- Adrián Pró, E. (2012). *Anatomía Clínica* (1ª ed.). Buenos Aires: Editorial Médica, Panamericana.
- Craig, A. Canby. (2007). *Sección III: Abdomen*. En *Anatomía basada en resolución de problemas*. Madrid: Elsevier España, S. A. Páginas 71 a 132.
- Drake, R. L., Vogl, A. W., & Mitchell, A. M. (2010). *Gray. Anatomía para estudiantes* (Vol. 2nd ed). London: Elsevier LTD. Retrieved from https://search-ebscohost com.ezproxy.universidadeuropea.es/login.aspx?direct=true&db=nlebk&AN=808906&lang=es& sit =eds-live&scope=site
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The recommended bibliography is indicated below:

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- Guyton, M. D. & Hall, D. (2011). *Tratado de fisiología médica*. Barcelona, España: Elsevier.
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- Rizzo, S. D.C. (2001). *Delmar's fundamentals of anatomy and physiology*. UUAA: Editorial Delmar of Thomson Learning.
- Schunke, et al. (Ed. 6ª) (2009). *Prometheus. Texto y Atlas de Anatomía*. Tomo 1: Anatomía general y Aparato locomotor.
- Thibodeau, G. A. (Ed. 15ª) (2016). *Estructura y función del cuerpo.* Barcelona, España: Editorial Elsevier.