1. BASIC INFORMATION

Course	Human Body Structure and Function I
Degree program	Physical Activity and Sport Sciences
School	Medicine Health and Sports
Year	First
ECTS	6
Credit type	mandatory
Language(s)	Spanish and English
Delivery mode	On-site and online
Semester	S1
Academic year	2025/26
Coordinating professor	Francisco Javier Pardo Gil

2. PRESENTATION

The objective of this course is to provide an integrated view of two of the basic disciplines in the study of the human body: anatomy and physiology. This vision is intended to provide a holistic approach to the morphology, structure and function of the organs and systems that make up the human body. The development of the course will allow the student to face the challenge of acquiring an understanding of the structure of the different organs and the basic physiological processes always having as a reference the implications of the practice of physical activity. This subject should be the basis on which to develop in subsequent courses the knowledge of the responses and adaptations associated with the practice of physical activity both in healthy people and in people with chronic pathologies.
The contents of this subject, as well as those of part II of the same, are organized in an integrated program that delves into the morphology, structure and function of the different body systems.

3. LEARNING OUTCOMES

Knowledge

KON1. Identifies the anatomical structures and functions of the various systems of the human body and consider pathophysiology to determine its applicability and development through physical exercise.

- Describes the basics of the anatomy and physiology of the human body using the correct anatomical and physiological terminology.
- Studies the organisation of the human body, from its microscopic biological structures (cells and tissues) to its macroscopic structures (organs and systems).
- Describes the relationships between the structure and function of the various systems/apparatuses for the proper homeostasis of the human body.

- Identifies the anatomical and functional components of the endocrine system: endocrine glands and organs.
- Explores the organisation and function of the lymphatic system and the immune system

Skills

AB01. Examines the anatomy and the functions of the various systems or structures and consider the extent to which they, along with pathophysiology, influence responses to physical exercise.

- Examines the basic anatomical and physiological components of the central nervous system and the peripheral nervous system.

Competences

COMP5. Develop the expertise to lead, plan and implement physical exercise and fitness programmes, and conduct technical/scientific evaluations of them, based on scientific evidence, in different fields, contexts and activities for the entire population, with a focus on particular groups such as senior citizens (the elderly), schoolchildren, people with disabilities and people with diseases, health problems or similar conditions (diagnosed and/or prescribed by a physician), taking into account gender and diversity considerations.

COMP6. Develop the expertise to identify, communicate and apply anatomical, physiological and biomechanical scientific principles in order to develop and carry out appropriate procedures, strategies, initiatives, activities and guidance, as well as conduct technical/scientific evaluations of them; ultimately to prevent and/or minimise the health risks to which all groups of the population are exposed in the practice of physical activity and sport.

COMP11. Analyse, identify, assess, promote, adapt and evaluate strategies, initiatives and activities that prompt the public to adopt active lifestyles and engage in the regular and healthy practice of physical activities, sports and exercises in an appropriate, effective and safe way; in a bid to improve their overall health, well-being and quality of life, and with a focus on particular groups such as senior citizens (the elderly), schoolchildren, people with disabilities and people with diseases, health problems or similar conditions (diagnosed and/or prescribed by a physician), taking into account gender and diversity considerations.

COMP38. Digital competence. Use information and communication technologies to search for and analyze data, research, communicate and learn.

COMP40. Teamwork. Cooperate with others in shared academic or professional objectives, participating actively, empathically and exercising active listening and respect for all members.

COMP41. Critical analysis. Integrate analysis with critical thinking in a process of evaluating different ideas or professional possibilities and their potential for error, based on evidence and objective data that lead to effective and valid decision-making.

4. CONTENT

Theme 1. Discovering and organizing the human body: embryology, levels of organization (cell, tissues and organs), homeostasis and body fluids.
Theme 2. Inquiring into the systemic level of the human body: presentation and localization of organ systems and applied terminology.
Theme 3. Central and peripheral nervous system: location, anatomical structures and functionalities.
Theme 4. Endocrine system: location and anatomical structure and function of the endocrine glands and organs.
Theme5. Blood and its immune function: composition, cellular structure and functionalities.
Theme 6. The lymphatic system: location, anatomical structure and functionalities.

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Lecture
- Simulation
- Project-based learning

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning Activity	Number of hours
Master classes	10
practical application classes	20
Autonomous work	56
Debates and colloquiums	8
presential evaluation tests	2
Tutoring	8
Oral presesntations	4
Written reports	22
Activities in workshops and/or laboratories	20
TOTAL	**150**

Online mode:

Learning Activity	Number of hours
Synchronous virtual master classes	10
Synchronous virtual classes of practical application	20
Written reports	22
Activities in workshops and/or laboratories	20
Autonomous work	56
Synchronous virtual academic tutoring	12
Virtual forums	8
presential evaluation tests	2
TOTAL	**150**

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
Presential evaluation tests	45%
Workshop-laboratory practice notebooks	50%
Reports and writings	5%

Online mode:

Assessment system	Weight
Presential evaluation tests	45%
Workshop-laboratory practice notebooks	50%
Reports and writings	5%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. First exam period

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

The student must deliver the activities not successfully completed in the first exam period after having received the corresponding corrections from the professor, or those that were not delivered in the first place.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Activity 1. Anatomy laboratory practice: planes, axes, types of bones and joints.	Week 3-4
Activity 2. Laboratory practice: Nervous system reaction time.	Week 5-7
Activity 3. Objective multiple-choice test	Week 8
Activity 4. Report: muscle as an endocrine organ.	Week 9-12
Activity 5. Practical activity endocrine system	Week 13-15
Activity 6. Simulated laboratory (Labster): blood and immune function.	Week 18
Activity 7. Final test	Week 19

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAFÍA

The main reference work for this subject is:

- Tortora, G.J., Derrickson, B. (2022). Principles of Anatomy and Physiology. Madrid. Panamericana

The recommended Bibliography is:

- Berne y Levy.(2018) Physiology. Ed. Elsevier
- Drake, R.L. GRAY. 5ª ed. (2024). Anatomy for students. ELSEVIER
- Escuredo, B., Sánchez, J.M., Borrás, F.X., & Serrat, J. (2002). Estructura y función del cuerpo humano. McGraw-Hill Interamericana.
- Guyton-Hall (2016). Medical Physiology. Elsevier
- Marieb, E.N. (2008). Human Anatomy and Physiology. Pearson Education
- Patton, K. T., & Thibodeau, G. A. (2021). Anatomy and Physiology. Elsevier.
- Silverthorn (2014) Human Physiology: An Integrated Approach. Panamericana

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

orientacioneducativa@universidadeuropea.es

11. ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.

WORK PLAN FOR THE COURSE

HOW TO COMMUNICATE WITH YOUR PROFESSOR

Whenever you have a question about the content or activities, don't forget to post it to your course forum so that your classmates can read it.

You might not be the only one with the same question!

If you have a question that you only want to ask your professor, you can send him/her a private message from the Campus Virtual. And if you need to discuss something in more detail, you can arrange an advisory session with your professor.

It's a good idea to check the course forum on a regular basis and read the messages posted by your classmates and professors, as this can be another way to learn.

SCHEDULE ACTIVITIES

This table shows the delivery deadline for each assessable activity in the course, as well as the delivery dates:

Week	Contents	Learning activities /Assessables	Weight of evaluable activity
Week 1	Presentation Theme 1. Discovery and organization of the human body: embryology, levels of organization (cells, tissues and organs), homeostasis and body fluids.	• Theoretical and practical classes • Group dynamics • Tutoring	0%
Week 2	Theme 1. Discovery and organization of the human body: embryology, levels of organization (cells, tissues and organs), homeostasis and body fluids.	• Theoretical and practical classes • Group dynamics • Tutoring	0%
Week 3	Theme 2.Inquiring into the systemic level of the human body: presentation and localization of organ systems and applied terminology.	• Theoretical and practical classes • Data analysis • Group dynamics • Tutoring	0%
Week 4	Theme 2.Inquiring into the systemic level of the human body: presentation and localization of organ systems and applied terminology.	• Theoretical and practical classes • Debates and colloquiums • Tutoring **Activity 1: Anatomy laboratory practice Introduction**	15%
Week 5	Theme 3. Central and peripheral nervous system: location, anatomical structures and functionalities.	• Theoretical and practical classes • Data Analysis • Tutoring	0%

Week 6	Theme 3. Central and peripheral nervous system: location, anatomical structures and functionalities.	• Theoretical and practical classes • Group dynamics • Tutoring	0%
Week 7	Theme 3. Central and peripheral nervous system: location, anatomical structures and functionalities.	• Theoretical and practical classes • Data Analysis • Tutoring **Activity 2: Nervous system laboratory practice**	15%
Week 8	Theme 3. Central and peripheral nervous system: location, anatomical structures and functionalities.	• Theoretical and practical classes • Debates and colloquiums • Group dynamics • Tutoring	0%
Week 9	Theme 3. Central and peripheral nervous system: location, anatomical structures and functionalities.	• Tutoring • Resolution of doubts **Activity 3. multiple-choice test**	22,5%
Week 10	Theme 4. Endocrine system: location and anatomical structure and function of the endocrine glands and organs.	• Theoretical and practical classes • Data Analysis • Tutoring	0%
Week 11	Theme 4. Endocrine system: location and anatomical structure and function of the endocrine glands and organs.	• Theoretical and practical classes • Data Analysis • Tutoring	0%
Week 12	Theme 4. Endocrine system: location and anatomical structure and function of the endocrine glands and organs.	• Theoretical and practical classes • Debates and colloquiums • Tutoring **Activity 4. Muscle work as an endocrine organ**	5%
Week 13	Theme 4. Endocrine system: location and anatomical structure and function of the endocrine glands and organs.	• Theoretical and practical classes • Data Analysis • Tutoring • Debates and Colloquiums	0%
Week 14	Theme 4. Endocrine system: location and anatomical structure and function of the endocrine glands and organs. Theme 5. Blood and its immune function: composition, cellular structure and functionalities.	• Theoretical and practical classes • Data Analysis • Tutoring • Debates and Colloquiums **Activity 5. Endocrine practice**	15%
Week 15	Theme 5. Blood and its immune function: composition, cellular structure and functionalities.	• Theoretical and practical classes • Data Analysis • Tutoring • Debates and Colloquiums	0%
Week 16	Theme 5. Blood and its immune function: composition, cellular structure and functionalities.	• Theoretical and practical classes • Data Analysis • Tutoring • Debates and Colloquiums **Activity 6. Virtual laboratory (Labster) blood and immunity**	5%
Week 17	Theme 6. The lymphatic system: location, anatomical structure and functionalities.	• Theoretical and practical classes • Data Analysis • Tutoring • Debates and Colloquiums	0%
Week 18	Theme 6. The lymphatic system: location, anatomical structure and functionalities	• Theoretical and practical classes	0%

		• Data Analysis • Tutoring	
Week 19	Theme 6. The lymphatic system: location, anatomical structure and functionalities	• Theoretical and practical classes • Data Analysis • Tutoring • Debates and Colloquiums **Activity 7. Final multiple choice test**	22,5 %

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

DESCRIPTION FOR ASSESSMENT ACTIVITIES

Activity 1. Laboratory practice of basic aspects of human anatomy.
- To understand the different anatomical axes and planes.
- Visualize through anatomical models the different types of bones and joints.

Activity 2. Laboratory practice for the study of reaction time.
- To understand and apply in a practical way the different structures of the nervous system involved in a motor response to a stimulus.
- Practical application of the concepts of afferent and efferent pathways, integration center and effector organ.

Activity 3. Objective multiple-choice test

Activity 4. Work: muscle as an endocrine organ
- Reading of bibliographic sources
- To understand the importance of muscle as an endocrine organ.
- Contextualize the importance of physical activity in its implications for the health of the different organs.

Activity 5. Practice in the physiology laboratory
- Integration of the anatomy and physiology of the endocrine system.
- Understand the involvement of the different endocrine glands and the interrelationships between them.

Activity 6. Labster virtual lab: blood and immunity
- Understand the involvement of the blood's formative elements in immune function in a virtual laboratory setting.

Activity 7. Objective quiz
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RUBRICS FOR ASSESSMENT ACTIVITIES

	0	2.5	5	7.5	10
Content 50%	Does not meet the specified objectives	Partially meets the objectives	Meets objectives, but does not provide incomplete information or lose focus	Meets objectives and provides quality information, but no innovative ideas	Meets objectives and provides quality information, with innovative ideas
Presentation 50%	The activity is not prepared	Fulfills only the presence and only reads	Expresses and limits himself to reading while looking at the rest of his classmates.	Gives an adequate verbal explanation that facilitates understanding of the activity	fulfills all of the above and is also capable of capturing the attention of his colleagues by making gestures that help to follow them.

PLAGIARISM REGULATION

In accordance with the current student disciplinary regulations at Universidad Europea:

- Plagiarism, in full or in part, of intellectual works of any kind, is considered a very serious offense.
- Very serious offenses relating to plagiarism and the use of fraudulent means to pass assessment tests shall result in exclusion from the exams for the relevant period, as well as the inclusion of the offense and its details in the student's academic record.