1. BASIC INFORMATION

Course	Anatomy and Physiology of the Human body I
Degree Program	Dentistry
School	Faculty of Health Sciences
Year	First
ECTS	6 ECTS
Credit type	Basic
Language	Spanish/English
Delivery mode	Campus-based mode
Semester	First semester
Academic year	2025/2026
Coordinating professor	Cristina Estornut Navarro

2. PRESENTATION

This course serves as an introduction to Human Anatomy & Physiology, on the cellular, tissular, and macroscopic level.
The study of basic human anatomical, histological, and physiological concepts provides the student of a general comprehension of the human body behaviour.
Anatomy and physiology of human body I is a core course in the Health Sciences, and it is a subject that professional schools (e.g., medical, dental) both expect and require. Knowledge of the human body components and their functions, is the basis for many other modules or courses required in Dentistry Degree, such as Semiology, Microbiology, etc.

3. COMPETENCIES AND LEARNING OUTCOMES

Basic competencies:

- BC1 – That students have shown to possess and understand knowledge in the study area founded in the general secondary education.
- BC3 – That students have the ability to collect and interpretate relevant data to judge social, scientific and ethic relevant topics.
- BC5 – That students have developed this learning skills to further study on their own.

General competencies:

- GC11 – Ability to understand the basic biomedical sciences in which Dentistry is founded to ensure a proper buco-dental assistance.
- GC12 – Ability to understand and recognize the structure and function of the stomatognathic system at molecular, cellular, tissular, and organic levels during the diverse stages of life.
- GC18 – Knowledge to critically assess and use clinic and biomedical information sources to obtain, organize, interpretate and communicate sanitary and scientific information.
- GC19 – Knowledge of the scientific method and to have critical ability to assess established knowledge and new information. Be able to hypothesize, recollect and asses critically the information to resolve problems following the scientific method.
- GC7 – Ability to promote new knowledge autonomous learning and techniques, as well as motivation to quality.

Cross-curricular competencies:

- CC2 – Self-confidence: Ability to act firmly and with enough motivation to reach his/her goals.
- CC5 – Interpersonal understanding: Ability to perform an active listening to reach agreements using an assertive communication.
- CC8 - Initiative: Ability to proactively anticipate proposing alternatives or solutions to the presented situations.
- CC9 - Planning: Ability to effectively determinate his/her goals and priorities defining the actions, deadlines and optimum resources required to reach these goals.

Specific competencies:

- SC01 – Ability to understand the basic biomedical sciences in which Dentistry is founded to ensure a proper buco-dental assistance. These sciences include proper content about Embryology, anatomy, histology, and physiology of human body, genetic, biochemistry, cell biology, microbiology and immunology.
- SC02 – To know function and morphology of the stomatognathic system, including specific knowledge about embryology, anatomy, histology, and physiology.

Learning outcomes:

- LO01 – Knowledge about the characteristics of different types of tissues (epithelial, connective, muscular and nervous).
- LO02 – Knowledge about skeletal muscle, including ossification processes and regulation of it, muscle physiology, and main muscles, bones and joints.
- LO03 – Knowledge of the mechanisms involved in hemostasis and relate to the professional world.
- LO04 – Knowledge of neurophysiology and the functioning of the nervous system
- LO05 – Skills to apply knowledge acquired to the professional work.

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

Competencies	Learning outcomes
GC12, GC18, GC7, BC1, BC3, CC2, CC9, SC01, SC02	**LO01:** Knowledge about the characteristics of different types of tissues (epithelial, connective, muscular and nervous).
GC12, GC18, GC7, BC1, BC3, CC2, CC9, SC01, SC02	**LO02:** Knowledge about skeletal muscle, including ossification processes and regulation of it, muscle physiology, and main muscles, bones and joints.
GC11, GC18, GC19, BC5, CC2, CC5, CC8, CC9	**LO03:** Knowledge of the mechanisms involved in hemostasis and relate to the professional world.
GC12, GC18, GC7, BC1, BC3, CC2, CC9, SC01, SC02	**LO04:** Knowledge of neurophysiology and the functioning of the nervous system
GC11, GC18, GC19, BC5, CC2, CC5, CC8, CC9	**LO05:** Skills to apply knowledge acquired to the professional work.

4. CONTENT

Unit 1. Introduction. Organization of human body. Homeostasis
Unit 2. Histology and Physiology of the blood and its components.
Unit 3. Organization and development of tissues. Types of tissues.
Unit 4. Integumentary system.
Unit 5. Introduction to Anatomy. Bones and Joints.
Unit 6. Cartilage and Bone tissues.
Unit 7. Muscular system Anatomy.
Unit 8. Muscular tissue.
Unit 9. Physiology of skeletal, cardiac and smooth muscles.
Unit 10. Nervous system Anatomy.
Unit 11. Nervous tissue.
Unit 12. Physiology of generation and transmission of nerve impulses. Action potentials and synapses.
Unit 13. Central nervous system (CNS) and Autonomic nervous system (ANS).
Unit 14. Oral mucosa. General characteristics
Unit 15. Organs of the oral cavity: lips, tongue, soft and hard palate.

5. TEACHING-LEARNING METHODOLOGIES

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

- Master class
- Problem-based learning (PBL)
- Simulation environments

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:

Formation activity	Hours
Master Classes	40 h
Practical tasks	13 h
Virtual master classes	12 h
Case study	10 h
Practical lessons and activities	10 h
Tutoring	18 h
On-site knowledge assessment	2 h
Study and autonomous work	45 h
TOTAL	**150 h**

7. ASSESSMENT

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

Campus-based mode:

Topic	Evaluation parameters	%
1. Exams	Knowledge tests	60%
2. Practices	Laboratory practices	20%
3. Activities	Practical exercices	20%

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 assessment period

To pass the course in the first exam period, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.
In any case, it will be necessary to obtain a grade greater than or equal to 5.0, independently, in each of the evaluation systems that make up the course (including the knowledge tests separated into partials). It may be assessed that a grade equal to or greater than 4 is needed in the knowledge tests when separated into partial exams.

The Universidad Europea de Valencia establishes continuous assessment as a system of evaluation of knowledge, skills and core, general, cross-curricular and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of the use of calls the student should be aware that, if any evaluation system provided in the Learning Guide, in the ordinary call (first exam period the student will have an overall grade of the subject, thus using up one call.

According to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. The lack of accreditation by the means proposed by the University will entitle the professor to grade the subject as failed in the ordinary call, according to the grading system.

Punctuality will be required, 3 delays of more than 15 minutes or departures before class will be counted as a lack of attendance.

The student must consult in the schedule of the course in the Virtual Campus the sessions of compulsory attendance in the classroom.

The mention of "Matrícula de Honor" will be awarded to students who have obtained a grade equal to or higher than 9.0. Their number may not exceed 5% of the students enrolled in each subject in the corresponding academic year, unless the number of students enrolled is less than 20, in which case only one honorary registration may be awarded.

7.2. Second assessment period

To pass the course in the second exam period, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.
In any case, it will be necessary to obtain a grade greater than or equal to 5.0 in the final test, so that it can be averaged with the rest of the activities.

The activities that were not handed in or passed in the first exam period must be submitted, after having received the corresponding corrections from the teacher.

The Universidad Europea de Valencia establishes the continuous evaluation as a system of assessment of knowledge, skills and core, general, cross-curricular, and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of using calls, the student should be aware that in the extraordinary call the Objective Test of Knowledge (OTK) which determines whether or not the call was used. In the exceptional case that the student only needs to pass evaluation system /s that are not the OTK, it will be considered

NP if not presented and will obtain a numerical grade if the student was examined of, at least, one of them.

Pursuant to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process, and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. Those students who, due to non-compliance with this requirement, must take the extraordinary call (second exam period), need to perform as many activities or knowledge tests determined by the teacher to recover this part successful completion will be based on the specified rubric.

8. SCHEDULE

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

Assessable activities	Date
First midterm test	November
Second midterm test	January
Laboratory practices	See Virtual Campus
Questionnaires of each lessons group	See Virtual Campus
Skills workshop	See Virtual Campus

This schedule may be modified for logistical reasons of the activities. Any modification will be notified to the student in a timely manner.

The student must consult the mandatory attendance sessions in the classroom in the schedule of the subject on the Virtual Campus.

9. BIBLIOGRAPHY

The main reference works for this subject are:

- TORTORA G. & DERRICKSON B. (2017) **Principles of Anatomy and Physiology.** Hoboken**,** John Wiley & Sons Inc. 17th edition.
- GUYTON AC & HALL JE. (2020) **Treaty of medical physiology**. Philadelphia: Elsevier. 14th edition.
- SILVERTHORN D. (2019) **Human physiology: an integrated approach**. Upper Saddle River: Pearson Education. 8th edition.
- NETTER, F.H. (2011) **Atlas of human anatomy**. Philadelphia: Elsevier. 5th edition
- GARTNER, L.P. & HIATT, J. L. (2007) **Color textbook of histology**. Philadelphia, PA: Saunders/Elsevier, 2007. 3rd edition

The recommended Bibliography is

- NETTER's Anatomy Coloring Book (2019). Philadelphia: Elsevier. 2nd Edition.
- BERNE RM & LEVY MN. (2018). **Physiology**. Philadelphia: Elsevier. 7th Edición
- JUNQUEIRA, L.C. & CARNEIRO, J. (2016) **Junqueira's Basic Histology**. New York: McGraw-Hill, 14th edition.
- MARIEB E.N. (2014). **Human anatomy and Physiology**. Boston: Pearson Education, D.L. 9th edition.
- ROSS, M.W. & PAWLINA, W. (2016). **Histología: A Text and Atlas : with Correlated Cell and Molecular Biology.** Philadephia: Lippincott Williams & Wilkins. 6th edición.
- POCOCK G. (2005) **Human physiology the basic of medicine**. Oxford: Oxford University Press. 2nd Edition
- ANTONY, C.P. (1983) **Anatomy and physiology**. Misuri: C. V. Mosby. 10th edition
- STANFIELD C.L. (2011). **Principles of Human Physiology**. Boston: Pearson Education, D.L. 4th edition

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.uev@universidadeuropea.es