1. BASIC INFORMATION

Course	Physiology of the Stomatognathic System
Degree program	Degree in Dentistry
School	Faculty of Health Sciences
Year	Second
ECTS	6
Credit type	Basic
Language(s)	English
Delivery mode	In-person
Semester	Third
Academic year	2025-2026
Coordinating professor	Sandra Atiénzar Aroca

2. INTRODUCTION

This course explains in detail the functioning of the various parts included in the oral cavity. These concepts are fundamental for the professional development of dentists, as this system is the main focus of dentistry. Moreover, it is essential that students are properly trained to gather information on various related topics and draw conclusions accordingly. This point is crucial for professional growth, as science continues to evolve, and intellectual and scientific stagnation is neither ethical nor moral.

3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:

- CB1 – Students have demonstrated that they possess and understand knowledge in the field of study, based on general secondary education.
- CB3 – Students are able to collect and interpret relevant data to make judgments on important social, scientific, and ethical issues.
- CB5 – Students have developed learning skills necessary for further autonomous study.

Cross-curricular competencies:

- CT2 – Self-confidence: ability to act decisively and with sufficient motivation to achieve one's goals.
- CT5 – Interpersonal understanding: ability to engage in active listening and reach agreements using assertive communication.
- CT8 – Initiative: ability to proactively anticipate and propose alternatives or solutions to presented situations.
- CT9 – Planning: ability to effectively set objectives and priorities, defining actions, timelines, and the necessary resources to optimize goal achievement.

Specific competencies:

- CE01 – Ability to understand the basic biomedical sciences on which dentistry is based, in order to ensure appropriate oral healthcare. These sciences include relevant content on embryology, anatomy, histology and physiology of the human body, genetics, biochemistry, cell biology, microbiology, and immunology.
- CE02 – Knowledge of the function and morphology of the stomatognathic system, including specific knowledge of embryology, anatomy, histology, and physiology.

Learning outcomes:

- RA01 – To identify the specific morphology of each human dental organ.
- RA02 – Knowledge of the microscopic characteristics of the various structures of the stomatognathic system.
- RA03 – To understand the physiological mechanisms of oral organs.
- RA04 – To foster the ability to relate, synthesize, research, and present content in connection with real practical work situations.

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

Competencies	Learning outcomes
CG12, CG18, CG7, CB1, CB3, CT2, CT9, CE01, CE02.	• RA01 – To identify the specific morphology of each human dental organ.
	• RA02 – Knowledge of the microscopic characteristics of the various structures of the stomatognathic system.
	• RA03 – To understand the physiological mechanisms of oral organs.
CG11, CG18, CG19, CB5, CT2, CT5, CT8, CT9.	• RA04 – To foster the ability to relate, synthesize, research, and present content in connection with real practical work situations.

4. CONTENT

- Topic 1: Introduction to Embryology
- Topic 2: Embryology and Odontogenesis
- Topic 3: Tooth Eruption
- Topic 4: Dental Tissues I: Pulp
- Topic 5: Dental Tissues I: Dentin
- Topic 6: Dental Tissues II: Enamel
- Topic 7: Dental Tissues III: Cementum and Periodontal Ligament
- Topic 8: Organs of the Oral Cavity: Lips, Tongue, Hard and Soft Palate
- Topic 9: Salivary Glands: General Characteristics and Regulation
- Topic 10: Taste Receptors
- Topic 11: Somatosensory Receptors: Touch, Pressure, Temperature, and Pain
- Topic 12: Dental Pain
- Topic 13: Oral Muscle and Joint Receptors
- Topic 14: Masticatory Movements
- Topic 15: Control of Mastication
- Topic 16: Swallowing: Gag and Cough Reflexes

5. TEACHING-LEARNING METHODOLOGIES

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

- Lecture-based classes
- 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:

Learning activity	Number of hours
Lectures	104 h
Practical exercises	8.5 h
Case Analysis	7.5 h
Laboratory Practices	10 h
Tutoring sessions	20 h
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:

Typer of evaluation	Assessment system	Weight
Test of Knowledge	First Midterm (30%) and Second Midterm (30%). Each test will include between 20–40 multiple-choice questions and 2–4 open-ended reasoning questions or structure identification questions using images or anatomical models. In the multiple-choice format, incorrect answers carry a negative mark, and unanswered questions receive 0 points.	60

	A minimum score of 5 or higher is required to pass the course.	
Laboratory Practice	Practical classes are held throughout the academic year and require students to prepare in advance, including work outside the classroom, as well as active participation both in class and in the community. Laboratory sessions will be assessed through a questionnaire at the end of each session. Attendance to the practical sessions is mandatory (100% attendance required).	20
Practical Exercises	Case Analysis (5%) Practical Exercises (5%) Oral presentation (10%)	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 exam 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 considered 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 first exam period, 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 exam 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.

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. 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	Deadline
First mid-term	First week of November
Practical exercise	Upon finishing the corresponding theory
Oral Presentations	Ends of November
Second mid-term	Official call in January
Competency-based assessment using a rubric in Laboratory Practice	After carrying out each practice session
Clinical Case Analisys	October

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. BIBLIOGRAPHY

The main reference work for this subject is:

- Actis, A. B. (2014). Sistema Estomatognático: bases morfofuncionales aplicadas a la clínica (No. 612.31). Médica Panamericana,.
- Manns Freese, A. (2013). Sistema Estomatognático: Fundamentos clínicos de fisiología y patología funcional (No. 612.31). Amolca,.
- TORTORA G. & DERRICKSON B. (2018) Principios de Anatomía y Fisiología. Panamericana; (15ª Edición)

The recommended Bibliography is:

- Ira Fox, S. (2008). Fisiología humana. 10ª edición. Ed. Mc Graw Hill.
- Fernandez-Tresguerres, J.A. (2011) Fisiología Humana. 4ª edición. Ed. McGrawHill.
- Hall, J.E. (2011) Guyton & Hall Tratado de Fisiología médica. 12ª edición. Ed. Elsevier España.
- Mezquita (2011). Fisiología Médica: del razonamiento fisiológico al razonamiento clínico. Ed. Panamericana.
- Molina, P. (2008) Fisiología Endocrina. 2ª Edición. Ed. McGraw Hill-Interamericana
- Koeppen, B.M. (2009) Berne y Levy: Fisiología. 6ª edición. Ed. Elsevier España.
- West, J.B. (2009) Best & Taylor Bases Fisiológicas de la Práctica Médica. 14ª edición. Ed. Panamericana.
- Constanzo, L.S. (2011) Fisiología. 4ª edición. Ed. Elsevier España.
- Silverthorn, D.U. (2008). Fisiología Humana. Un enfoque integrado. 4ª edición. Ed. Panaméricana.

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:
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