

1. BASIC DATA

Course	Physiology of the stomatognathic system
Degree	Dentistry
Faculty	Faculty of Health Sciences
Year	Second
ECTS	6 ECTS
Character	Compulsary
Language/s	English
Modality	Face-to-face assistance
Semester	Biannual
Academic year	2020/2021
Coordinating professor	Sandra Atiénzar Aroca

2. PRESENTATION OF THE SUBJECT

This subject will explain in detail the functioning of the different parts which are included in the oral cavity.

These concepts are central to the professional development of dentists, as it is in this system where dentistry focuses.

In addition, it will be essential for the student's training to properly learn how to collect information on various related issues and draw conclusions about them.

This point is crucial for professional development, as science continues to evolve and intellectual and scientific stagnation is neither ethical nor moral.

3. COMPETENCIES AND LEARNING OUTCOMES

Basic competencies:

- CB1 – Students have shown to possess and understand knowledge in the study area founded in the general secondary education.
- CB3 – Students have the ability to collect and interpretate relevant data to judge social, scientific and ethic relevant topics.
- CB5 – Students have developed this learning skills to further study on their own.

General competencies:

- CG11 – Ability to understand the basic biomedic sciences in which Dentistry is founded to ensure a proper buco-dental assistance.
- CG12 – 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.
- CG18 – Knowledge to critically asses and use clinic and biomedical information sources to obtain, organize, interpretate and communicate sanitary and scientific information.
- CG19 – Knowledge of the scientific method and to have critical ability to asses established knowledge and new information. Be able to hypothesize, recollect and asses critically the information to resolve problems following the scientific method.
- CG7 – Ability to promote new knowledge autonomous learning and techniques, as well as motivation to quality.

Transverse competences:

- CT2 – Selfconfidence: Ability to act firmly and with enough motivation to reach his/her goals.
- CT5 – Interpersonal understanding: Ability to perform an active listening to reach agreements using an assertive communication.
- CT8 - Initiative: Ability to proactively anticipate proposing alternatives or solutions to the presented situations.
- CT9 - Planning: Ability to effectively determinate his/her goals and priorities defining the actions, deadlines and optim resources required to reach this goals.

Specific competencies:

- CE01 – Ability to understand the basic biomedic sciences in which Dentistry is founded to ensure a proper buco-dental assistance. This sciences include porper content about

Embryology, anatomy, histology and physiology of human body, genetic, biochemistry, cell biology, microbiology and immunology.

- CE02 – To know function and morphology of the stomatognathic system, including specific knowledge about embryology, anatomy, histology and physiology.

Learning outcomes:

- RA01 - To determinate the specific morphology of each dental organ of the human species.
- RA02 - Knowledge about microscopic features of the diverse structures of the stomatognathic system.
- RA03 - To understand the physiologic mechanisms of the bucodental organs.
- RA04 - To promote the relation, synthesis, consultation and exposition abilities of the content with real practical work situations.

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

Competencies	Learning outcomes
CG12, CG18, CG7, CB1, CB3, CT2, CT9, CE01, CE02.	RA01: To determinate the specific morphology of each dental organ of the human species.
	RA02: Knowledge about microscopic features of the diverse structures of the stomatognathic system.
	RA03: To understand the physiologic mechanisms of the bucodental organs.
CG11, CG18, CG19, CB5, CT2, CT5, CT8, CT9.	RA04: To promote the relation, synthesis, consultation and exposition abilities of the content with real practical work situations.

4. CONTENTS

Topic 1: Introduction to the physiology of the stomatognathic system.

Topic 2: Dental organs.

Topic 3: Incisors and canines.

Topic 4: Premolars.

Topic 5: Upper molars.

Topic 6: Lower molars.

Topic 7: Embryology and dental eruption.

Topic 8: Temporary teeth.

Topic 9: Dental tissues I: dentin pulp complex.

Topic 10: Dental tissues II: Enamel.

Topic 11: Dental tissues III: Cementum and periodontium.

Topic 12: Oral mucosa. Characteristics and histopathology.

Topic 13: Organs of the oral cavity: lips, tongue, soft and hard palate.

Topic 14: Salivary glands I: general characteristics and histopathology.

Topic 15: Salivary glands II: minor and major salivary glands.

Topic 16: Salivary glands III: Regulation of saliva secretion.

Topic 17: Taste receptors.

Topic 18: Sensitive somatic receptors: touch, pressure and temperature and pain.

Topic 19: Dental pain.

Topic 20: Muscles and oral articular receptors.

Topic 21: Chewing movements.

Topic 22: Chewing control.

Topic 23: Swallowing reflexes, coughing and sneezing.

5. TEACHING – LEARNING METHODOLOGIES

The following are the types of teaching-learning methodologies that will be applied:

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

6. TRAINING ACTIVITIES

Next, the types of training activities that will be carried out and the dedication in hours of the student to each of them are:

Type of activity	Number of hours
Master classes	104 h
Practice activities	8,5 h
Clinical cases	7,5 h
Laboratory sessions	10 h
Tutorials	20 h
TOTAL	150 h

7. ASSESSMENT PROCEDURES

The evaluation systems are listed below, as well as their weight over the total grade for the course:

Type of procedures	%
Knowledge assessment	60
Laboratory practices	20
Practice activities	20

In BlackBoard, when you access into the course, you will be able to consult in detail the activities that you must carry out, as well as the delivery dates and the evaluation procedures of each one of them.

7.1. Ordinary call

The subject will be continuously evaluated through knowledge assessment or mid-term exams and activities during the academic year of the subject.

To pass the course in the first exam period, you must have 5 (out of 10) or more points in each of the following activities:

- **Knowledge assessment or mid-term exams + activities:** A grade greater than or equal to 5 must be obtained in each activity.
- **Laboratory practices.** A grade greater than or equal to 5 must be obtained in the final questionnaire.

7.2. Extraordinary call

To pass the course in the first exam period, you must have 5 (out of 10) or more points in each of the following activities:

- **Knowledge assessment or mid-term exams + activities:** A grade greater than or equal to 5 must be obtained in each activity.
- **Laboratory practices.** A grade greater than or equal to 5 must be obtained in the final questionnaire.

8. BIBLIOGRAPHY

- **Indispensable:**
 - Nanci, A. (2017) **Ten Cate's Oral Histology: Development, Structure, and Function**. St. Louis, Mo: Mosby Elsevier, cop. 9th edition.
 - Feher, J. (2017). **Quantitative Human Physiology: An introduction**. Amsterdam; Boston: Elsevier/AP, Academic Press in an imprint of Elsevier. 2nd edition.
 - Silverthorn, DU (2019). **Human Physiology: An integrated approach**. New York: Pearson Education, Inc. 8th edition.
- **Complementary:**
 - Hargreaves, KM; Goodis, HE and Tay, FR. (2012). **Seltzer and Bender's dental pulp**. Hanover Park, IL: Quintessence. 2nd edition.
 - Silverthorn, DU (2019). **Fisiología Humana. Un enfoque integrado**. Buenos Aires: Editorial Médica Panamericana. 8ª edición.

9. DIVERSITY ATTENTION UNIT

Students with specific educational support needs:

Curricular adaptations or adjustments for students with specific educational support needs, in order to guarantee equal opportunities, will be set by the Diversity Attention Unit (UAD).

The issuance of a report of curricular adaptations / adjustments by this Unit will be an essential requirement, so students with specific needs for educational support should contact through: unidad.diversidad@universidadeuropea.es at the beginning of each semester.

10. SATISFACTION SURVEYS

Your opinion matters!

The European University encourages you to participate in satisfaction surveys to detect strengths and areas for improvement regarding teachers, degrees and the teaching-learning process.

The surveys will be available in the survey space of your virtual campus or through your email.

Your assessment is necessary to improve the quality of the degree.

Thank you very much for your participation.