

## 1. BASIC INFORMATION

Course	Physiology of the Stomatognathic System
Degree program	Odontology degree
School	Biomedical Science
Year	Second
ECTS	6
Credit type	Basic
Language(s)	English
Delivery mode	Campus-based
Semester	S2
Academic year	2025-2026
Coordinating professor	Dra. Cristina Albarrán Nogales

## 2. PRESENTATION

In line with one of the objectives of the university such as to train professionals in the field of dentistry, the future dentist, students must acquire a deep understanding of the basic functions of the stomatognathic system, the histology of its various structures, and the interrelationships between them, with particular emphasis on the neurophysiology of the stomatognathic system. This knowledge will enable students, in the future, to understand the disorders and pathologies that may develop in the oral and dental region.

## 3. LEARNING OUTCOMES

### Knowledge:

- **CON05:** Promote autonomous learning of new knowledge and techniques, as well as motivation for quality.
- **CON09:** To understand and recognise the structure and normal function of the stomatognathic apparatus, at molecular, cellular, tissue and organic levels, in the different stages of life.
- **CON18:** Know the biomedical sciences on which dentistry is based to ensure correct oral-dental care. These sciences must include appropriate content on embryology, anatomy, histology and physiology of the human body.
- **CON21:** Know the morphology and function of the stomatognathic apparatus, including appropriate contents of specific embryology, anatomy, histology and physiology.

### Subject-specific knowledge

- To know the microscopic aspects of the different structures of the stomatognathic system.
- Understand and manage the general concepts of neuroanatomy of the head and neck, with a clinical-therapeutic orientation.
- To understand the physiological mechanisms of the organs of the oral area.

### Skills:

- **HAB04:** Knowing, critically assessing and knowing how to use clinical and biomedical information sources and critically assessing them to obtain, organise, interpret and communicate scientific and health information.

- **HAB05:** Know the scientific method and have the critical capacity to evaluate established knowledge and new information. Be able to formulate hypotheses, collect and critically evaluate information to solve problems, following the scientific method.

### Subject-specific skills

- Apply the knowledge acquired in the resolution of simulated clinical cases.

### Competences:

- **CP44:** Integrate analysis with critical thinking in a process of evaluating different ideas or professional possibilities and their potential for error, based on objective evidence and data leading to effective and valid decisionmaking.

## 4. CONTENT

- Introduction to the stomatognathic system
- Dental organs and tissues
- Structure and function of the cranial nerves
- Sensory and motor function of the oral cavity
- Structure and function of saliva. Taste and swallowing

## 5. TEACHING-LEARNING METHODOLOGIES

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

- - MD1 Master class
- - MD3 Cooperative learning
- - MD6 Workshop/Laboratory-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:

Learning Activity (Actividades Formativas - AF)	Number of hours
AF1 Master classes	45.5
AF2 Practice-orientes Seminars	4
AF8 Laboratory and Workshop Activities	8
AF10 Autonomous work	90
AF12 On-site assessment tests	2.5
<b>TOTAL</b>	<b>150</b>

## 7. ASSESSMENT

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

Assessment system	Weight
SE1 On-site assessment tests	70%
SE7 Systematic observation	30%

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 subject during the regular assessment period, you must obtain a final weighted average mark of 5.0 out of 10.0 or higher. However, this final mark will only be considered valid if the minimum requirements established for each of the assessable components have been met, as outlined in the learning guide. This means that even if the weighted average is equal to or greater than 5.0, the subject will not be passed if any of the individual components has not reached the required minimum mark.

The final grade for the subject during the regular assessment period is composed as follows: 44.1% from the final in-person objective test, 30% from practical sessions, 12.6% from online in-person multiple-choice tests, 6.3% from the in-person written exam with open-ended questions (integrated activity), 5.25% from digital block activities, and 1.75% from online reinforcement activities. To be considered valid according to the criteria set out in the learning guide, the weighted average of the final objective test, the online in-person multiple-choice tests, and the written exam with open-ended questions must be equal to or greater than 5.0 out of 10.0 in order to be included in the final calculation.

Likewise, the arithmetic mean of the practical activities and the weighted average of the digital block activities and reinforcement activities must also be equal to or greater than 5.0.

### 7.2. Second exam period

In order to pass the course in the extraordinary call, 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 mark of 5.0 or higher in the retake assessment, so that it can be averaged with the rest of the assessable activities.

Depending on the parts not passed in the ordinary exam, you will have to make up those that have not reached the minimum grade required:

- If during the ordinary period the weighted average mark obtained from the final objective test, the online in-person multiple-choice tests, and the written exam with open-ended questions is below 5.0, a specific written test must be taken, designed according to the criteria and instructions of the teaching staff.
- If you have not passed the practical part of the subject (practical sessions average), you will have to retake it, according to the indications of the course teachers.
- If during the first exam period, no mark has been obtained for the block of continuous assessment activities (digital block activities, and online reinforcement activities), these must be completed in person during the second exam period, according to the schedule set by the teaching staff. These activities may either be the same as the original ones or replaced by alternative tasks, at the discretion of the teaching staff.

## 8. SCHEDULE

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

Assessable activities	Deadline
Activity 1. Digital Block Activity 1	Week 3
Activity 2. Digital Block Activity 2	Week 4
Activity 3. Practical Class 1: Histology of the oral cavity	Week 5
Activity 4. In-person online test 1	Week 6
Activity 5. Practical Class 2: Structure and function of the cranial nerves	Week 8
Activity 6. Digital Block Activity 3	Week 10
Activity 7. Digital Block Activity 4	Week 11
Activity 8. Digital Block Activity 5 Activity 9. In-person online test 2	Week 12
Activity 10. Practical Class 3: Structure & function of the trigeminal nerve	Week 13
Activity 11. In-person online test 3 Activity 12. Integrated activity	Week 14
Activity 13. Practical Class 4: Histology of the salivary glands and its physiology	Weeks 14-15
Activity 14. In-person online test 4 Activity 15. Digital Block Activity 6	Week 16
Activity 16. Online Reinforcement Activities	Week 17
Activity 17. Final theoretical assessment	Weeks 17-18

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

## 9. BIBLIOGRAPHY

The main reference work for this subject is:

- Schünke Michael, Schulte Erik, Schumacher Udo. *Prometheus. Texto y Atlas de Anatomía. Tomo III. Cabeza, Cuello y Neuroanatomía*. 5ª Ed. Panamericana. ISBN: 9788491106258.

The recommended Bibliography is:

- Gómez de Ferraris, Campos Muñoz. *Histología, Embriología e Ingeniería Tisular Bucodental*. 4ª Ed. Panamericana. ISBN: 9786078546244.
- Fawcett W. *Tratado de histología*. 12ª Ed. Interamericana McGraw Hill. ISBN: 9788448601072.
- Welsch U. *SOBOTTA. Histología*. 3ª Ed. Panamericana. ISBN: 9786077743910.

- Guyton A. E., Hall J. E., Hall M. E. *Tratado de fisiología médica*. 14ª Ed. Interamericana Mc Graw Hill. ISBN: 978-8413820132.
- Dvorkin M. A., Cardinali D. P., Iermoli R. *Best&Taylor. Bases Fisiológicas de la Práctica Médica*. Panamericana. ISBN: 9789500604604.
- Sadler T. W. *Langman Embriología médica*. 15ª Ed. Panamericana. ISBN: 9788419284860.
- Costanzo L. S. *Fisiología*. 4ª ed. Elsevier. ISBN: 9788480868242.
- Nelson Stanley J., Ash Major M. *WHEELER. Anatomía, fisiología y oclusión dental*. 9ª ed. Elsevier. ISBN: 9788480866903.
- Nelson Stanley J., Ash Major M. *Wheeler's dental anatomy, physiology, and occlusion*. 10<sup>th</sup> Ed. Elsevier. ISBN: 9780323263238.
- Schünke Michael, Schulte Erik, Schumacher Udo. *Colección Prometheus. Texto y Atlas de Anatomía*. Panamericana. EAN: 9788498358933.
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- Schünke Michael, Schulte Erik, Schumacher Udo, Stefan Cristian. *THIEME Atlas of Anatomy. Volume III. Head, Neck, and Neuroanatomy*. 3<sup>rd</sup> Ed. Thieme. ISBN: 9781626237223.
- Paulsen Friedrich and Waschke Jens. *Sobotta. Atlas de anatomía humana. Cabeza, Cuello y Neuroanatomía*. 23ª Ed. Elsevier. ISBN: 9788480868747.
- Netter. *Anatomía de cabeza y cuello para odontólogos*. Neil. S. Norton, Ph.D. Elsevier Masson.
- *Anatomía Humana*. Latarjet, M. Ruiz Liard, R.C. Panamericana, S.A.
- *Anatomía Humana*. Rouviere, H. Delmas, A. Masson Williams & Wikins.
- *Anatomía de la cabeza*. Velayos Santana, J.L. Panamericana.
- *Langman. Fundamentos de embriología médica*. Sadler. Panamericana.
- *Embriología clínica*. Moore, L. Persaud. Elsevier.
- *Gray Anatomía para estudiantes*. Drake Rl. Elsevier. 2010.
- *Atlas en color y texto de anatomía oral, histología y embriología*. BERKOVITZ BKB, HOLLAND GR, MOXHAM BJ. Revisión científica Antonio Bascones Martínez. Mosby/Doyma Libros, 1995.
- *Oral Structural Biology*. Hubert E. Schoreder. Thieme.
- *Gray's Anatomy for Students*. Richard L. Drake, Wayne Volg, Adam W.M. Mitchell. Elsevier. 2010.
- *Principles of Anatomy and Physiology*. Tortora G., Derrickson, B. Wiley.
- *Anatomical Atlas of the Temporomandibular Joint*. Ide Y, Kamimura K. Quintessence Publishing.
- *Atlas of human anatomy*. Mark Nielsen, Shawn D. Miller. John Wiley & Sons Incorporated.
- *Nomenclatura anatómica ilustrada*. Wolfgang Daubler, Heinz Feneis. Elsevier Masson.

Useful WEB resources:

- ✓ <https://anatomylearning.com>
- ✓ <http://biblioteca.uem.es/>

## 10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance, Diversity and Inclusion 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 mean 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 opportunity 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](mailto: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 on virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.