

## 1. Basic information on the course/module

<b>Subject</b>	Anatomy and Physiology II
<b>Degree</b>	Dentistry
<b>School</b>	Faculty of Health Sciences
<b>Year</b>	First
<b>ECTS</b>	6 ECTS
<b>Credit type</b>	Mandatory
<b>Language</b>	English
<b>Delivery mode</b>	On-site
<b>Semester</b>	Second semester
<b>Academic year</b>	2020/2021
<b>Coordinating professor</b>	Sandra Atienzar

### 1. Presentation of the course/module

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 provide the student of a general comprehension of the human body behavior.

Anatomy and physiology of human body II 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, systems and their functions, is the basis for many other modules or courses required in Dentistry Degree, such as Semiology, Microbiology, etc.

### 2. Competencies and learning outcomes

**Basic competencies:**

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

**General competencies:**

- CG11 – Ability to understand the basic biomedical 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.

**Cross-curricular competencies:**

- 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 biomedical sciences in which Dentistry is founded to ensure a proper buco-dental assistance. This sciences include proper 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:**

- LO01: Vision and knowledge about anatomy and physiology of the main systems of the human body.

- LO02: Integration among systems.
- LO03: Complementation to the formation acquired in this field during the first stage of the subject (Anatomy and physiology of human body I).
- LO04: Ability to apply the knowledge acquired to the professional work.
- LO05 – Skills to apply knowledge acquired to the professional performance.

The table below shows the relation between the competencies developed during the course and the envisaged learning outcomes:

Competencies	Learning outcomes
CG12, CG18, CG7, CB1, CB3, CT2, CT9, CE01, CE02.	LO01
	LO02
	LO03
CG11, CG18, CG19, CB5, CT2, CT5, CT8, CT9.	LO03
	LO04

### 3. Contents

Lesson 1 - Introduction to endocrinology.

Lesson 2. The hypothalamus-pituitary axis

Lesson 3. The thyroid and parathyroid gland.

Lesson 4. Adrenal Glands

Lesson 5. Endocrine pancreas

Lesson 6. Physiology of the reproductive system

Lesson 7. Introduction to Cardiovascular Physiology

Lesson 8. Electrical system of the heart

Lesson 9. Mechanical system of the heart

Lesson 10. Cardiac expenditure

Lesson 11. Hemodynamics, circulation and pressure

Lesson 12. Regulation of circulation and blood pressure

Lesson 13. Introduction to respiratory and mechanical physiology

Lesson 14. Gas exchange

Lesson 15. Regulation of pulmonary ventilation

Lesson 16. Elements of renal function

Lesson 17. Regulation of water reabsorption and urine concentration

Lesson 18. Regulation of acid-base balance

Lesson 19. Digestive physiology I

Lesson 20. Digestive Physiology II

Lesson 21. General functions of the liver.

## 4. Teaching methodologies

The types of teaching-learning methodologies that will be applied are indicated below:

- Master class
- Problem-based learning
- Simulation environments

## 5. Formation activities

The types of training activities to be carried out and the student's dedication in hours to each of them are identified below:

### Face-to-face modality:

Formation activity	Hours
Master Classes	104 h
Practical tasks	8,5 h
Case study	7,5 h
Laboratory practices	10 h
Tutoring	20 h
<b>TOTAL</b>	<b>150 h</b>

## 6. Monitoring and assessment

The following table shows the assessable activities, their respective assessment criteria, and the weight each activity carries towards the final course grade:

Tipo de Evaluación	Criterio de evaluación	Peso (%)
<i>Knowledge Assessment</i>	<ul style="list-style-type: none"> <li>• There will be two partial sessions in the subject: 30% each partial.</li> <li>• Each test will include 40 multiple choice questions and 4 reasoning writing questions or structure identification questions using images or anatomical models.</li> <li>• Regarding the multiple choice format, incorrect answers are marked negative and unanswered questions count 0 points. It is mandatory to obtain a grade of 5 or more to pass the subject.</li> <li>• If it fails, you can return (with the same format) during the extraordinary call.</li> </ul>	60
<i>Laboratory practices</i>	<ul style="list-style-type: none"> <li>• Practical classes are held throughout the year and require prior preparation of students outside the classroom, as well as active participation in the classroom and the community. The practices include some of the usual clinical exams for determining the basic functions of the major body systems.</li> <li>• The work outside the classroom will consist essentially of looking for information in textbooks and popular science pages on the Internet so that the student will contrast the knowledge acquired in the classroom and complete the information required to meet the objectives of the course.</li> <li>• The laboratory sessions will be evaluated by the teacher. To achieve this, different tasks or activities will be proposed at the beginning of each laboratory session. These activities will be carried out by the students and given to the teacher at the end of each lab session for evaluation.</li> <li>• It is not necessary to obtain a minimum qualification, however, if the student has not carried out the laboratory practices, the maximum qualification that the student will aspire to in this subject will be an 8.</li> </ul>	20
<i>Excercises</i>	<p><u>Questionnaires:</u></p> <ul style="list-style-type: none"> <li>• Knowledge will be tracked via individual online questionnaire after some lectures. The completion of these questionnaires is not mandatory, so it is not necessary to obtain any minimum qualification in this field to pass the subject.</li> <li>• It is not necessary to obtain a minimum qualification, however, in case the student has not taken these questionnaires, the maximum qualification to which the student will aspire in this subject will be a 9.</li> </ul>	10
	<p><u>Oral Presentation:</u></p> <ul style="list-style-type: none"> <li>• Students will have a group activity in which they will cover a broader aspect of any lecture that the teacher tells them. The format of this</li> </ul>	10

presentation will be an oral or similar presentation that the student will upload to the Virtual Campus within the term established by the teachers.

- No es necesario obtener una cualificación mínima, sin embargo, en caso de que el alumno no haya realizado la presentación oral, la máxima nota a la que a • It is not necessary to obtain a minimum qualification, however, in case the student has not made the oral presentation, the maximum mark to which they will aspire will be a 9.
- • The rubric used to evaluate the presentation will be available on the Virtual Campus.

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

## 6.1. First exam period

The subject will be evaluated continuously through 2 partial knowledge assessments:

**First Partial exam:** Lessons 1-12 (30%).

**Second Partial exam:** Lessons 13-21 (30%).

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

- **Knowledge tests:** A grade greater than or equal to 5 must be obtained in each of the partial exams.
- **Laboratory practices.**

## 6.2. Extraordinary call

- To pass the course in the first exam period, you must score 5 (out of 10) or more points in each of the following activities:
  - **Knowledge assessments:** The student will make up only the partial that they have failed.
  - **Laboratory practices.**

## 7. Schedule

This section indicates the schedule with delivery dates of assessable activities of the subject:

Actividades evaluables	Fecha
First partial test	Week 7-8
Second partial test	January, ordinary call
Questionnaires	Throughout the course
Oral presentations	Week 13 Week 14
Laboratori practices	Practice 1: Week 5 Practice 2: Week 13

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

## 8. Bibliography

Here is the recommended bibliography:

- Principles of Anatomy and Physiology (17 th edition 2017)  
Tortora, G. J. and Derrickson B.  
John Wiley & Sons Inc ISBN: 978-1119400066
- Treaty of medical physiology (13 th edition 2015)  
Guyton, A.C. and Hall, J.E.  
Elsevier ISBN: 978-1455770052
- Basic Histology (14th edition 2015)  
Junqueira, L.C. and Carneiro, J. Masson  
McGraw-Hill Education ISBN: 978-1260288414
- Anatomy and Physiology (20th edition 2012)  
Thibodeau, G. A. and Patton, K.T.  
Mosby ISBN: 978-0323096003
- Atlas of Human Anatomy (7th edition, 2018)  
Netter, F.H.  
Elsevier ISBN: 978-0323393225
- Color Atlas of Histology (5th edition 2009)  
Gartner, L.P. and Hiatt, J.L.  
Lippincott Williams and Wilkins ISBN: 978-0781788724

- Gray's anatomy for students. (4th edition, 2019)  
Drake, R, Wayne Vogl, A and Mitchell, A.  
Elsevier. ISBN: 978-0323393041

## 9. Diversity attention unit

Students with specific educational support needs:

Curricular adaptations for students with specific educational support needs, in order to guarantee equal opportunities, will be guided by the Diversity Attention Unit (UNIDAD DE ATENCIÓN A LA DIVERSIDAD, UAD).

The issuance of a report of curricular adaptations by the UAD will be an essential requirement, so students with specific needs for educational support should send an e-mail to [Unidad.diversidad@universidadeuropea.es](mailto:Unidad.diversidad@universidadeuropea.es) at the beginning of each semester.

## 10. Satisfaction surveys

Your opinion matters!

Universidad Europea encourages you to participate in satisfaction surveys to detect strengths and areas for improvement regarding the teaching staff, the degree 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.



## HOW TO COMMUNICATE WITH YOUR PROFESSOR

### Professor:

- Amparo Quiles Catalá, MD [amparo.quiles@universidadeuropea.es](mailto:amparo.quiles@universidadeuropea.es)

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 *Blackboard*. 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.