Universidad Europea

1. BASIC INFORMATION

Subject	Anatomy and Physiology I
Degree	Dentistry
School	Faculty of Health Sciences
Year	First
ECTS	6 ECTS
Credit type	Mandatory
Language	English
Delivery mode	On-site
Semester	First semester
Academic year	2020/2021
Coordinating professor	Daniel López Malo

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 form any other modules or courses required in Dentistry Degree, such as Semiology, Microbiology, etc.

3. 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 assess 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 assess 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 – Self-confidence: 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 optimum resources required to reach these goals.

Specific competencies:

- CE01 – 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.
- CE02 – To know function and morphology of the stomatognathic system, including specific knowledge about embryology, anatomy, histology, and physiology.

Learning outcomes:

- LO01 – Knowledge about features of different tissue types (epithelial, connective, muscular and nervous).
- LO02 – Knowledge about skeletal muscle, including ossifications and self-regulation processes, muscle physiology, main muscles, bones, and joints.
- LO03 – Knowledge about haemostasis mechanisms and its relationship with professional environment.
- LO04 – Knowledge about neurophysiology and nervous system functions.
- 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
	LO04
CG11, CG18, CG19, CB5, CT2, CT5, CT8, CT9.	LO03
	LO05

4. CONTENTS

Lesson 1. Introduction and organization of human body.

Lesson 2. Organization of tissues. Types of tissues.

Lesson 3. Tegumentary system.

Lesson 4. Cartilage, bones, and joints.

Lesson 5. Nervous tissue and neurophysiology.

Lesson 6. Muscular tissue.

Lesson 7. Blood.

Lesson 8. Central nervus system.

Lesson 9. Autonomic nervous system (ANS).

5. TEACHING METHODOLOGIES

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

- Master class
- Problem-based learning
- Simulation environments

6. 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
TOTAL	**150 h**

7. 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:

Assessable activity	Weight (%)
Knowledge assessment	60
Laboratory practices	20
Questionnaires	20

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.

7.1. First exam period

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

First partial test (30%): Anatomy: (Introduction – Osteology); Histology: Lessons 1 to 4; Physiology: Lessons 1 to 5. The knowledge test corresponding to the first partial test will include 30 multiple-choice questions with four possible answers and 3 reasoning writing questions or structure identification questions using images or anatomical models. Regarding the multiple-choice questions, incorrect answers are marked negative and unanswered questions count 0 points. A grade of 5 or higher is required to pass the subject.

Second partial test (30%): Anatomy: (muscular system and nervous system); Physiology: Lessons 6 to 14). The knowledge test corresponding to the first partial test will include 40 multiple-choice questions with four possible answers and 4 reasoning writing questions or structure identification questions using images or anatomical models. Regarding the multiple-choice questions, incorrect answers are marked negative and unanswered questions count 0 points. A grade of 5 or higher is required to pass the subject.

To pass the subject in ordinary call you must obtain 5.0 out of 10 or more points in each of the following assessable elements:

- **Knowledge assessment**: A grade equal to or greater than 5.0 must be obtained in each of the partial knowledge tests.
- **Laboratory practices.**

To pass the course in ordinary call, you must obtain a grade equal to or greater than 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary for you to obtain a grade greater than or equal to 5.0 in the final test, so that it can make an average with the rest of the activities.

In order to be able to take the evaluative test in an ordinary call, students must attend a minimum of 50% of the theoretical classes. Otherwise, they must be submitted to the evaluation test of the extraordinary call.

The activities will be delivered using the virtual platform before the deadline. Any work or activity submitted later than that date and / or that does not meet the required characteristics (in general, other than a .pdf, .doc, .docx, .ppt or .pptx file) may be rated with 0 points.

The student who has completed less than 30% of the activities or tests required for the evaluation of the subject will be considered "student not presented" in the corresponding call. If the student has completed a minimum of 30% of the activities, in that case they will have a numerical note in the call.

The mention of "Honor Degree" will be awarded to students who have obtained a grade equal to or greater 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 a single Honor Degree may be granted.

7.2. Extraordinary call

- To pass the course in ordinary call, you must obtain a grade equal to or greater than 5.0 out of 10.0 in the final grade (weighted average) of the course.
- In any case, it will be necessary for you to obtain a grade greater than or equal to 5.0 in the final test, so that it can make an average with the rest of the activities.
    - **Knowledge assessments**: The student will recover the partial that they have pending to approve in ordinary call.
    - **Laboratory practices.**

8. SCHEDULE

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

Assessable activities	Date
First partial test	Week 10
Second partial test	January, ordinary call
Practical tasks	Group work (group oral presentation): Delivery date to be determined in Blackboard. Questionnaires: Throughout the course
Laboratory practices	Histology practice: Week 5 Physiology practice: Week 12

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

9. BIBLIOGRAPHY

Specific 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

Supplementary Bibliography:

- 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

10. 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.diversidaduev@universidadeuropea.es at the beginning of each semester.

11. 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.