

**COURSE DATA****Data Subject**

<b>Code</b>	33933
<b>Name</b>	Physiology of organ systems
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2021 - 2022

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1205 - Degree in Human Nutrition and Dietetics	Faculty of Pharmacy and Food Sciences	1	Second term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1205 - Degree in Human Nutrition and Dietetics	3 - Physiology	Basic Training

**Coordination**

<b>Name</b>	<b>Department</b>
BURGUETE LOPEZ, MARIA CONSUELO	190 - Physiology
CENTENO GUIL, JOSE M	190 - Physiology

**SUMMARY**

This subject aims to study, separately, the different apparatus and systems as part of the human body, but always bearing in mind the concept that the body is a unit of function, so it also addressed the study of the interrelationship between them

**PREVIOUS KNOWLEDGE**



### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

It is recommended to have passed the subject General Physiology

## OUTCOMES

### 1205 - Degree in Human Nutrition and Dietetics

- Know, judge and know how to use and apply the sources of information related to nutrition, food, lifestyles and health.
- Develop the capacity to gather and convey information in English at a level equivalent to the B1 level in the Common European Framework of Reference for Languages.
- Adquirir la formación básica para la actividad investigadora, siendo capaces de formular hipótesis, recoger e interpretar la información para la resolución de problemas siguiendo el método científico, y comprendiendo la importancia y las limitaciones del pensamiento científico en materia sanitaria y nutricional.
- Learn to understand the body as a whole.
- Understand and interpret how each organ is involved in the maintenance of the constancy of the internal environment.
- Know how to set out problems and use the appropriate methods for their resolution, being able to apply critical reasoning.
- Learn the fundamentals for using the scientific equipment directly related to their professional activity.
- Skills in analysis and synthesis.
- Ser capaz de trabajar en equipo y de organizar y planificar actividades.
- Know the structure and function of the human body at the various stages of life, from the molecular level to the full body.

## LEARNING OUTCOMES

- Knowledge of different apparatus and systems.
- Understand that the coordinated operation of all apparatus and systems, specialised in carrying out a specific function, collaborate in the maintenance of the life of the organism.
- Know how problems arise and use the appropriate methods for its resolution .
- Learn the scientific apparatus management directly related to their professional work



## DESCRIPTION OF CONTENTS

### 1. Cardiovascular

Explains the structure and circulatory function and components that allow the electro-mechanical processes that determine the heart function. Also studies the General and local characteristics of the circulation and the circulatory regulation.

### 2. Respiratory

Defines concepts and explains the structure and respiratory function and components that enable it. It also studies the regulation of breath.

### 3. Digestive

Studies more broadly the motor, secretory, absorptive and chemical processes that occur in the digestive tract

### 4. Renal function

Are particularly studied the excretory function of the kidney and its mechanisms; also the transport and disposal of urine. Also refers to the rest of the kidney functions. Maintenance of the physiological pH and electrolytic and water balance

### 5.

### 6. Endocrine

Concepts (hormone, recipient, etc.) are defined and studied in an integrated manner the processes regulated by the hormones (intermediary metabolism, fosfocálcico, sugars, growth and reproduction).

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	38,00	100
Laboratory practices	14,00	100
Seminars	2,00	100
Tutorials	2,00	100
Development of group work	25,00	0
Study and independent work	65,00	0
<b>TOTAL</b>	<b>146,00</b>	

**TEACHING METHODOLOGY**

- This subject is approached by means of lectures and laboratory practice.
- In addition, establishes a number of hours of tutoring so that students can resolve the doubts that may arise in each of the thematic units.
- On the other hand, students must perform and exhibit a theoretical work.
- During the activities, both theoretical and practical, examples of how the subject should be applied in relation to the Sustainable Development Goals (SDGs) will be given. The SDGs will also be taken into account in the proposals of topics for the coordinated seminars. This will provide students with knowledge, skills and motivation to understand and manage these SDGs, while promoting reflection and criticism.

**EVALUATION**

Teamwork (Coordinated Seminar: 10% of the final grade). The personal participation of each student and the quality of the work presented will be evaluated according to the working rules of Coordinated Seminar that appears on the website of the Facultat de Farmàcia. It will not be possible to pass the subject without the participation in the Coordinated Seminar.

The assessment of the knowledge of the program contents imparted during the course, will be based on a written test that will correspond to 90% of the final grade, which will include theoretical and practical contents of the entire subject. This test will be done on the date indicated in the official calendar of the school. This exercise may include test questions, short questions, and development questions. It will be necessary to obtain at least 4.5 points in the written test and after adding the score of the Coordinated Seminar the final score needs to be at least 5 points to pass the subject.

In addition, if the examination consists of several parts (test, short questions, development questions ...), it will be necessary to obtain a minimum score in all parts. In this case, the complete qualification needs to be at least 4.5 points.



Students who do not pass the subject on the first call, will need to attend a second written test which include theoretical and practical contents of the entire program of the subject in the second call. In the evaluation of this second call, the teamwork presented score (10% of the final grade) will be taken into account.

## REFERENCES

### Basic

- Thibodeau, G. A. y Patton, K.T. Anatomía y Fisiología. Ed. Harcourt. 2007
- Tortora- Derrickson. Principios de Anatomía y Fisiología. Ed. Panamericana. 15 Ed. 2018

### Additional

- Pocock-Richards. Fisiología Humana. Ed. Masson. 2005
- Fox, S.I.: Fisiología Humana. Ed. McGraw-Hill Interamericana. 2003
- Guyton A.C. and Hall J., S.I.: Fisiología Humana. Ed. McGraw-Hill Interamericana. 2003
- M. González-Gross. Nutrición Deportiva. Desde la Fisiología a la práctica. Editorial Médica Panamericana

## ADDENDUM COVID-19

**This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council**

### 1. Content

The contents initially included in the teaching guide are unchanged.

### 2. Workload and temporary education planning

The workload for the student, derived from the number of credits, remain unchanged as well. However, the methodology of the activities changes along with the conventional teaching guide as a result of the current situation, which made it necessary to adopt a hybrid model of teaching.

### 3. Teaching methodology

- Theoretical teaching: will be carried out through synchronous sessions (videoconferences synchronized on BBC, or other technology indicated by the Centre) and face-to-face teaching. The students will be distributed into two groups, 50% of the total number of students in each one. While one group learns in the classroom of the Faculty, the other will connect online, alternating their attendance every week. The classes will always be held following the schedule (date and time) approved by the Center Board.





- Tutoring: All sessions will be held face-to-face according to the dates set by the course calendar.
- Coordinated or uncoordinated seminars: All sessions will be held face-to-face according to the dates set by the course calendar.
- Practical classes: All sessions held face-to-face and according to the calendar of the course, but with the appropriate modifications to comply with the safety regulations against CoVid19. These regulations include:
  - Limiting the capacity of laboratories to 50% by setting shifts for each group.
  - Use of audiovisual descriptions that serve as a pre-practice introduction (virtual classroom).
  - Reducing the time spent on sample processing times by showing the student the result that would be obtained if standard incubation times (24 hours) had elapsed, etc.

If a state of total confinement were to be reached, all face-to-face teaching would be done online.

#### **4. Evaluation**

The evaluation will consist of the following parts:

- Individual exercises given online: 10-20 % of the total grade of the subject.
- Coordinated Seminar work: 10% of the total grade of the subject. It will be mandatory to deliver the written work, the diary of each student and the exhibition file, all in proper electronic format.
- Final exam: 70-80 % of the total grade of the subject. The test will contain multiple choice or true/false questions. To pass the subject, it will be necessary to obtain at least 4 out of 10 points in the exam and when adding the grades of the individual exercises and the Coordinated Seminar the score is at least 5 out of 10 points. If the future state of the pandemic allows it, the final examination shall be face-to-face and on the dates indicated. However, if in-person testing is not viable, the final exam will be carried out online, through the virtual classroom. The online exam will consist of online tasks or questionnaires with single or multiple choice questions, supplemented with short questions, and/or on certain occasions through an oral examination by videoconference.

Students who do not pass in the first call, must be present for examination of the entire theoretical and practical subject of the course in the second call, which will have the same characteristics as the first and will also consider the grades of the Coordinated Seminary and the individual exercises.