



PRESENTATION

Brief description: The objective of this subject for students is to learn the basic concepts and general principles necessary to understand the functions of the different systems of the organism, the way in which they work and the way in which each one of them contributes to the functions of the organism.

In addition, the student must know the repercussions of alterations to the physiological functions of the different systems, the mechanism of action of these alterations, and their basic expression. It is important to understand the organism as a whole, relating the different systems through physiology and pathophysiology.

The study of this subject provides the necessary bases to understand the clinical sciences.

- **Degree:** Physiology (in English)
- **Module in the Degree Program:** Module I: Basic Sciences of Nursing. Subject: Structure, function and behaviour of the human being.
- **Number of credits:** 6 ECTS
- **Year, semester:** First Year, First Semester
- **Type of course:** Basic
- **Professors:** Dr Miguel Burgos Lozano (mburgosloz@unav.es), course director; Dra Rosa castilla Madrigal (rcastilla@unav.es); Dra Jaione Barreneche Huici (jaiobar@unav.es)
- **Language:** English
- **Department:** Nutrition, Food Science and Physiology (*Departamento de Ciencias de la Alimentación y Fisiología*). School of Pharmacy and Nutrition.
- **Lectures schedule:**
 - Monday 10:00-12:00
 - Wednesday 10:00-12:00
- **Classroom:** Aula 1 Castaños building

PRACTICAL SEMINARS

Practical lessons will take place from 12-14h in laboratory 5D01 (Science building, 5th floor) except session 1 that will take place in microscopy room (Basement, Library building) and session 6 that will take place in room 4C (Science building, 4th floor)

9, 23 sept, 7 oct, 4, 18, 27 (10h) nov

LEARNING OUTCOMES (Competencies)

- **CB1.** That students have demonstrated knowledge and understanding in an area of study that starts from the base of general secondary education, and is usually at a level that, although supported by advanced textbooks, also includes some aspects that imply insights from the cutting edge of your field of study.
- **CB2.** That students know how to apply their knowledge to their work or vocation in a professional way and have the skills that are usually demonstrated through the development and defence of arguments and problem solving within their area of study.



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- **CG01.** Being able, in the field of nursing, to provide technical and professional health care appropriate to the health needs of the people they care for, in accordance with the state of development of scientific knowledge at any given time and with quality levels and security that are established in the applicable legal and deontological regulations.
- **CG02.** Plan and provide nursing care aimed at individuals, families or groups, oriented towards health results, evaluating its impact, through clinical and care practice guides, which describe the processes by which a problem is diagnosed, treated or cared for. of health.
- **CG03.** Know and apply the fundamentals and theoretical and methodological principles of nursing.
- **CG05.** Design care systems aimed at individuals, families or groups, evaluating their impact and establishing the appropriate modifications.
- **CG06.** Base nursing interventions on scientific evidence and available means.
- **CG09.** Promote healthy lifestyles, self-care, supporting the maintenance of preventive and therapeutic behaviours.
- **GC10.** Protect the health and well-being of the people, family or groups served, guaranteeing their safety.
- **GC11.** Establish effective communication with patients, family, social groups and peers and promote health education.
- **GC17.** Carry out nursing care based on comprehensive health care, which involves multi-professional cooperation, integration of processes and continuity of care.
- **CE01.** Know and identify the structure and function of the human body. Understand the molecular and physiological bases of cells and tissues.

PROGRAM

- Unit I: Introduction to Physiology
- Unit II: Cardiovascular and Blood Physiology
- Unit III: Respiratory Physiology
- Unit IV: Digestive Physiology
- Unit V: Renal Physiology
- Unit VI: Endocrine Physiology

LEARNING ACTIVITIES

The planning of the Physiology subject includes the following training activities:

1) Lectures: 42 hours

Essential and organized information on the topics of the theoretical program will be provided. The preferred teaching methodology will be expository classes, although other resources (video viewing, active questions, kahoot etc.) will be used to promote understanding of the content and stimulate active participation.

Students will be provided with presentations of the topics to be developed in class through the Aula Virtual/ADI platform. However, this material (slides) is of a complementary or auxiliary nature to the teacher's expository classes and does not in any case replace the content of the recommended bibliography or the notes that each student takes in the teacher's theoretical sessions. For this reason, attendance, note-taking and participation in classes is recommended.



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There will be questions in class, problems, tests of multiple choice questions, etc. about the knowledge acquired. **Active participation of students and interaction with the teacher is recommended.** These activities (integrated within the theoretical sessions) aim to reinforce and consolidate the theoretical knowledge of class and see the application of this knowledge in real life.

The active participation and the results obtained may suppose up to an additional 10% on the final mark of the subject (up to an additional point).

Among the possible activities to be carried out are: questions in class (stimulate participation), practical cases, problems, short questions, mock test questions.

2) Complementary activities: 8 hours (non-contact)

A series of presentations on additional topics will be shown on the virtual platform for the students to study, after which they are encouraged to arrange tutorials with the teacher to resolve any doubts. On a class day before each exam, there will be a test (which will count for continuous assessment) with questions exclusively on these topics so that students can assess their knowledge. In the exams, up to 5% of questions related to these topics may appear.

3) Seminars: 10 hours (face-to-face)

Five (face-to-face) seminars will be held during the course with an **approximate duration of 1.5-2 hours per seminar.**

The seminars are mandatory and face-to-face. These seminars are intended to reinforce, strengthen and promote the acquisition of knowledge of the subject through practical application through computer simulation programs (classes in computer rooms). Students must attend the seminar with the necessary material (seminar script) that is available on the ADI platform. Those students who attend the seminar without the indicated material and/or preparation may be penalized in their attitude.

During the development of the seminars and/or at the end of each session, several questions may be raised that must be answered individually or collectively (as indicated) and must be delivered or sent for further evaluation. This work will be evaluated by the professor together with other aspects for the overall qualification of the seminar.

For the realization of each seminar, the previous study of the seminar script and the teaching material posted in Adi is an essential requirement. Students must acquire a good theoretical base on the specific topic that will allow them to consolidate their knowledge through the practical application tested during the seminar. The active reflection of each student will be stimulated, understanding the processes, sequence and consequences on the health of the patient.

4) Tutorials: 1 hour (not face-to-face/remote)

It is planned to carry out optional personal interviews with the students for an individualized follow-up. The student must have the initiative and anticipation of requesting attention and advice. This is of special value after the partial exam, so that each student can know the evolution of it in the subject as well as if the study method is appropriate.

5) Personal study: 85 hours (non-contact)



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The student will be personally responsible for organizing their study time and personal work for the acquisition of the knowledge established in the theoretical and seminar program of the subject at their own pace. The teaching staff recommends the study of the subject on a regular and constant basis, from the first day of class, as well as the participation, attendance and carrying out of the proposed activities.

6) Evaluation: 4 hours (face-to-face)

Two scoring tests (exams) will be carried out to assess the acquisition of the corresponding knowledge, skills and aptitudes according to the competencies established for the subject. The scoring tests will take place: one in the middle of the semester (mid-October) and another at the end of the semester (exam period).

The subject proposes the use of the following teaching methodologies to achieve the competencies of the subject:

- Lecture/Seminar attendance
- Work: Individual and Group learning
- Troubleshooting and reports
- Study of the content based on different sources of information
- Mock evaluation tests (scorable)

Training activities (6 ECTS x 25 hours = 150 hours of student work)

- Theoretical classes: 40 hours
- Seminars: 10 hours
- Complementary activities: 8 hours
- Tutorials: 1 hour
- Personal work: 85 hours
- Evaluation: 4 hours

ASSESSMENT

The final grade for the course will be the weighted average of the theoretical part (75%) and the seminars (25%). Additionally, students may add up to one point for participation in complementary activities and assistance during the course. This additional point will only be counted if both the theoretical part and the seminars have been approved.

ORDINARY CALL

The evaluation of the theoretical part will be carried out through two scoring tests: partial exam and final exam.

Partial exam: Corresponding to the topics of **Units I, II and III, and seminars 1 and 2**. To release this subject content, it is necessary to obtain a score **equal to or greater than 6**. The partial exam will be a multiple choice format (four possible options) and will count negative answers (-0.25 per question).

The people who release that part of the subject, in the final exam in December will be examined from the rest of the units and seminars 3-5. For the people who release (grade equal to or greater than 6), it is mandatory to obtain a minimum score of 5. In this case, the grade of the theoretical part will be the weighting between both grades (partial exam and final exam, 50% each part).



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Final exam: The final exam will consist of multiple choice questions with four possible options and will count negative answers (-0.25 per question). It is necessary to get a **grade equal to or greater than 5 to pass the theoretical part and average with the grade from the seminars**. The content of the multiple choice questions will be about the theory and the seminars.

Continuous evaluation during the theoretical sessions:

Attendance and participation during the theoretical sessions will be valued positively. As a formative evaluation, during the theoretical sessions there will be tests (using the kahoot tool). The qualification of the theoretical continuous evaluation will always be positive and may not exceed 10% of the final grade.

Seminar evaluation:

In each seminar the following aspects will be evaluated:

- Theoretical knowledge of each seminar (by means of short or multiple choice questions, reports and/or practical/clinical cases)
- Attitude of the student (punctuality, prior preparation of the seminar, delivery of activities on time)

Those students who are in the 2nd call (or higher) and have passed the seminars, do not have to repeat them since they keep the grade obtained in the previous course.

The seminars account for 25% of the final grade for the course.

EXTRAORDINARY CALL

Students who have failed the subject in the ordinary call (December), may take the final exam of the subject in the extraordinary call (June). Said exam will contain questions from the theoretical program and from the seminars. The mark of the seminars is kept and once the theory is approved, the seminars weigh in the same proportion as in the ordinary call (75% theory and 25% seminars).

OFFICE HOURS

Dr Miguel Burgos Lozano (mburgosloz@unav.es)

- Room: 1410, Building: Research Building, Floor: 1
- Tutorial Hours: Email for appointment

Seminars Professors:

Dra. Rosa Castilla Madrigal (rcastilla@unav.es)

- Room: 0292, Research Building, Floor: 0
- Tutorial Hours: Email for appointment

Dra. Jaione Barreneche (jaioabar@unav.es)

- Room: 1351, Research Building, Floor: 1
- Tutorial Hours: Email for appointment



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BIBLIOGRAPHY AND RESOURCES

"Un viaje de iniciación al aprendizaje de Fisiología humana", 1a edición. Miguel Burgos, 2024, Editorial Eunsa.

Blog dedicado a los temas suplementarios de la asignatura: <https://mburgosloz.wordpress.com>

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