

30806 - General and nutritional physiology

Syllabus Information

Academic year: 2023/24

Subject: 30806 - General and nutritional physiology

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 1

Semester: Second semester

Subject type: Basic Education

Module:

1. General information

The general objective of this subject is the acquisition of knowledge about the functioning of the different organ systems , providing an integrated view of the whole physiology, especially in the aspects of digestive function and nutrition . It is included in the Basic Training subjects, so the knowledge and skills acquired in it, together with those of other subjects, will be applied to other subjects of the degree, such as Nutrition and Dietetics, Public Health and Food, etc.

These approaches and objectives are aligned with the following SDGs of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>): Goal 3: Health and wellness; Goal 4: Quality Education; Goal 12: Responsible production and consumption.

2. Learning results

The student, in order to pass this subject, must demonstrate the following results....:

1. Is able to know, understand and explain the physiological fundamentals of the different tissues and systems of the organism (nervous, endocrine, cardiovascular, respiratory, renal, reproductive and digestive).
2. Is able to interrelate different concepts and knowledge to describe the functioning of the organism.
3. Is able to obtain data by performing physiological techniques in the laboratory and analyse them to explain certain physiological phenomena.
4. Knows English terminology related to some physiological processes.
5. Is able to obtain and synthesize information on a physiological topic, working in a group, to project it in an oral presentation.

3. Syllabus

The theoretical program will be divided into thematic blocks covering all the physiological systems of the organism:

1. Introduction and physiology of the nervous system
2. Blood and cardiovascular physiology
3. Respiratory and renal physiology
4. Physiology of the digestive system
5. Physiology of the endocrine system
6. Reproductive and developmental physiology
7. Integrated physiology

The practical program will include laboratory and simulation sessions on the physiology of the blood, cardiovascular, respiratory, renal, digestive and endocrine systems, as well as exercise physiology.

4. Academic activities

Master classes: The theoretical contents of each thematic block will be taught for 40 hours in the classroom.

Practical classes: They will be carried out in 8 sessions of 2 hours of practice in the Physiology laboratory or simulations of physiological processes in the computer classroom. After the completion of the practice, the results obtained will be analysed and reasoned.

Supervised work: Each group of 4-5 students will prepare a joint paper, under the supervision of a teacher, on an aspect related to Physiology, which will be presented and discussed orally before the rest of the class (4 hours of seminars)

5. Assessment system

Theoretical contents: will be evaluated by means of two midterm exams. Each one will cover half of the syllabus and will consist of a written test of 15 multiple-choice questions and 6 short questions. The multiple-choice questions are 4 options with one correct answer and incorrect answers will not be penalized. Both parts will be evaluated out of 10 final points, but in the test, to obtain the grade of 5 it will be necessary to reach 60% of the maximum grade. The grade of the midterm exam will be calculated with 40% of the multiple choice test grade and 60% of the short questions test. In order to pass a midterm, 5 points are required, but from a grade of 4.5 onwards, the difference up to a passing grade can be compensated with the grade of the other midterm exam. In each official call, the student will be able to take the mid-term exams they consider adequate, and there will be an additional mid-term exam in the middle of the semester. Once a midterm has been passed, it is considered passed only for the current academic year.

Practical contents: it will be necessary to demonstrate the acquisition of the skills and abilities of the practices during their performance. Otherwise, it will be necessary to take a practical laboratory test in the official call. In addition, at the end of each practice, it will be evaluated by means of a questionnaire of short and/or multiple-choice questions. If the overall grade of the practical questionnaires is not passed, the student shall take a written exam of 10 short questions on the physiological knowledge developed in the practical classes in the official call for exams.

Tutored work: the oral presentation of the assigned topic will be evaluated and carried out by each group of 4-5 students, being the grade obtained the same for all the components of the group. The material prepared for the presentation of the work, the oral presentation of the same and the argumentation against questions raised during the debate will be evaluated. If it is not passed, a written developmental exam on a physiology-related topic will be taken by the student at the official call.

The practice and the supervised work will be graded out of 10 points and to pass them it will be necessary to obtain 4 points. The passing grade will be kept in case of having to enrol again in the subject another year. In addition, they can be passed in each of the official calls.

In order to pass the subject it will be necessary to pass, separately, the 4 evaluation tests. The final grade for the subject will be calculated as a weighted sum: 35% for each midterm, 15% for the practices and 15% for the tutored work.